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LOGISTIC SUPPORT (2)
IN THE VIETNAM ERA

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MONOGRAPH 15
PETROLEUM, OIL
AND LUBRICANTS

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A REPORT
BY THE JOINT LOGISTICS REVIEW BOARD

326



OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301

18 DEC 1970

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CHAPTER I

INTRODUCTION

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INTRODUCTION

1. BASIS FOR STUDY

a. In the Deputy Secretary of Defense's memorandum of 17 February 1969, establishing the Joint Logistics Review Board, general ground rules and Terms of Reference were established. The specific statement concerning fuels and related items is: "In-depth studies will be conducted as appropriate for specialized items of supply such as ammunition, petroleum and construction materials."¹

b. In a memorandum dated 8 May 1969, certain recommendations of the DOD Petroleum Study Report of 8 October 1968 which had received general nonconcurrences were referred by the Secretary of Defense, to the Joint Logistics Review Board for further study, evaluation, and recommendations.

c. To conduct the petroleum study, a team was organized with members from the Army, Navy, Air Force, Marine Corps, and Defense Supply Agency.

2. SIGNIFICANCE

a. The success of the existing POL² logistic systems and procedures is attested to by the fact that when field commanders were asked to list logistic problem areas during their tour in Vietnam, not one included POL. This does not mean that there is an absence of lessons to be learned. There were many times when the supply of POL was critical and when extraordinary actions were required. Furthermore, it is important to note that control of the seas and the absence of attacks against tankers, such as occurred during World War II, simplified the problems significantly.

b. Six characteristics of bulk POL support demand a supply system different from that of other items or classes of supply. These characteristics are:

(1) Bulk fuels are essential for modern warfare and must be immediately available.

(2) The volume consumed is high, and the rate of inventory turnover is extremely rapid, requiring that bulk POL be controlled more closely than other supply items. Because the aforementioned also applies to industrial operations, the large quantities of products the military require are not usually available from industry on short notice. In fact, the consumption of bulk fuels measured in tons is greater than the consumption of all other military supplies combined.

(3) Bulk fuels depend on tankers for transportation and tanks for storage. In any emergency, there is usually a shortage of both tankers and tankage, particularly in the critical

¹Deputy Secretary of Defense, Memorandum, subject: Joint Logistics Review Board (JLRB), 17 February 1969.

²The British term "POL" for Petrol, Oil and Lubricants became the abbreviation used by the allied forces in World War II to denote all petroleum fuels, lubricating oils and greases. The word "petrol" has been changed by U.S. Military Forces to petroleum. POL is used for petroleum, oil and lubricants.

POL

area of operations. To express this in another manner, the cargo is liquid and cannot be stacked, rolled, or dumped.

(4) The sources of bulk petroleum products are worldwide. Distribution of other items is basically from the continental United States (CONUS) outward. Petroleum distribution can be in almost any direction. Even though refined products are manufactured in varying quantities throughout the world, crude oil, the basic raw material, is available in excess of local demands in only six general locations: the Middle East, Libya, Indonesia, the Caribbean, South America, and the U.S. Gulf. Alaska will soon be a significant source of crude oil.

(5) POL products are highly susceptible to many types of degradation, i.e., degradation by evaporation, water, dust, bacteria, rust, other products, and sometimes by aging. Therefore, POL products need frequent and continual quality surveillance inspections with limited product substitutions possible.

(6) The one characteristic that physically isolates POL receiving and storage facilities from other similar supply facilities is the flammable, explosive nature of some bulk POL products. This dangerous aspect of POL requires that POL support activities be physically separate from other supply support activities.

The combination of these elements in the supply of bulk POL products requires extremely close liaison with all echelons of command in the POL support cycle.

c. Military POL Support Compared to the Commercial System. The preceding remarks have been directed toward the basic differences between POL and other commodities within the military supply systems. There is another aspect, that of the difference between the military fuel support system and an industrial fuel system, which should be highlighted. Land distribution and storage of bulk fuels are similar to those of the military in a nonhostile situation or in conditions as they exist in Vietnam. However, from a worldwide distribution standpoint, there are significant differences. The military distributes and stores refined products in large quantities worldwide. Industry, on the other hand, ocean transports primarily crude oil. Some refined products are transported for commercial use. However, when a particular area develops a significant consumption of refined products, a refinery is built and industry then hauls crude oil to the area. This increase in one-product hauling, crude, is more economical for the more stable requirements of industry and makes the use of the supertanker more economically desirable. The effect of increased emphasis on supertankers on the military system is the constant reduction in the availability of smaller T2 and T5 tankers on the commercial market.

3. STUDY OBJECTIVES. The objectives of the study of POL conducted by the Joint Logistics Review Board are to:

a. Assess the readiness of the military departments and the Defense Supply Agency to respond to the Vietnam conflict and identify any areas of potential improvement.

b. Identify strengths and weaknesses in the POL systems and make recommendations to enhance readiness, at reduced costs if practicable.

c. Respond to the Secretary of Defense's memorandum of 8 May 1969 to further review and evaluate the Department of Defense (DOD) Petroleum Study Report of 8 October 1968.

4. SCOPE. To make an in-depth study of petroleum in accordance with the Terms of Reference outlined in the Deputy Secretary of Defense's memorandum, it was determined that the structure and operations of the worldwide logistics system would be reviewed not only as it existed during the Vietnam era (1 January 1965 to present) but also earlier.

a. There have been many major studies and reviews during the past decade which primarily addressed procurement and distribution of POL from the point of view of contracting, ordering, and financing, and the peripheral aspects of overall management of these elements

to the delivery of bulk supplies to the major storage sites. This review attempts to evaluate support in terms of results to the deployed military forces which are critically dependent on the petroleum products being supplied. Emphasis has been placed on identifying strengths and weaknesses, as well as differences and commonalities among the petroleum supply systems of the Services. These elements along with operational logistics in the combat area provide the basis for evaluating the total system readiness, effectiveness, responsiveness, and economy of petroleum support to the ultimate user.

b. On 8 May 1969, in a memorandum, the Secretary of Defense directed the Joint Logistics Review Board to further review and evaluate the DOD Petroleum Study Report of 8 October 1968, widely known as the Colglazier Report. A review of the Colglazier Report will follow the overall POL systems' review.

5. ORGANIZATION OF MONOGRAPH

a. Chapters II and III present a description of the Service POL systems and a historical background of the POL operations and support in the Vietnam conflict.

b. Chapters IV through VI discuss the issues, including distribution and storage; the implications of large tankers, floating storage and construction of POL facilities; accountability; contractor support; and contract administration.

c. Chapter VII reviews and comments on the Petroleum Management Study of October 1968.

d. The appendixes contain the backup material for the preceding chapters plus a glossary of commonly used POL terms.

CHAPTER II

DESCRIPTION OF POL SYSTEMS AND RESPONSIBILITIES

CHAPTER II

DESCRIPTION OF POL SYSTEMS AND RESPONSIBILITIES

1. **INTRODUCTION.** This chapter provides background information as a basis for the review of petroleum, oil and lubricants (POL) performance and discussion of problem areas in subsequent chapters. It summarizes national, Department of Defense (DOD), and Services' policies affecting defense petroleum logistics. The overall organization and responsibilities of DOD in the area of petroleum is reviewed and the POL logistic system of the Services described. In that the overall logistic responsibilities are set forth in Chapter 3 of Volume II, only those responsibilities that refer specifically to petroleum products are included in this monograph.

2. BACKGROUND

a. The first significant military requirement for petroleum was generated when the U. S. Navy began converting its fleet from coal to fuel oil in 1912.

b. Early in World War II, the conditions of all-out war, the vastness of the forces employed, the critical dependence of these forces on petroleum fuels, the dependence of Great Britain on timely deliveries, and the large number of tankers sunk by U-boats in the early months of the war dictated the actions taken to provide for centralized coordination of the procurement and shipment of POL products. With dramatic increases in requirements occasioned by the war, it became increasingly evident that the Army and Navy were vying with each other as well as with essential civilian activities for available supplies. Since both Services had significant air arms, the competition was particularly keen for the severely limited supplies of high octane aviation gasolines. In recognition of this situation and complementing the responsibilities of the military departments for POL support of their forces, provision was made for special coordination. The Army-Navy Petroleum Board was established on 14 July 1942, as an agency of the combined Chiefs of Staff with responsibilities tailored to the situation at the time, to coordinate the supply and distribution of petroleum to U. S. and allied forces.

c. The joint approach to coordination of POL continued through the Korean War, accompanied by changes following the National Security Act of 1947 and amendments thereto. With a third military department it became the Armed Services Petroleum Board in February 1948. On 3 June 1949, the Board was transferred to the Munitions Board and was renamed the Munitions Board Petroleum Committee.

d. A major change took place in 1953 when the Committee was disestablished and responsibilities were assumed by the Office of the Secretary of Defense (OSD). The Petroleum Logistics Division was organized in the Directorate of Transportation and Petroleum Policy under the Assistant Secretary of Defense (Supply and Logistics). The Division was upgraded to the Directorate for Petroleum Logistics Policy in June 1959 and headed by a vice admiral.

e. In July 1956, the Secretary of the Navy was designated Single Manager for Petroleum, and on 7 January 1957 the Military Petroleum Supply Agency, under the Navy's Bureau of Supplies and Accounts, replaced the Armed Services Petroleum Purchasing Agency.

f. Following the establishment of the Defense Supply Agency (DSA) under the Secretary of Defense, the single-manager functions were taken over by that agency and the Armed Service Petroleum Purchasing Agency became the Defense Petroleum Supply Center. When procurement of coal was added in 1963, the Defense Petroleum Supply Center was renamed the Defense Fuel Supply Center (DFSC). At the same time, wholesale inventory management responsibilities for packaged petroleum products, chemicals, and gas cylinders were transferred to the DFSC from the military departments. A further shift in responsibilities within the DSA took place in 1965 when these items were transferred to the Defense General Supply Center (DGSC). In July 1964,

the Air Force general officer assigned as Director, Petroleum Logistic Policy, in the Office of the Secretary of Defense was assigned additional duties as the Commander of the DFSC.

3. POLICY

a. National Policies Affecting Defense Petroleum

(1) General. Petroleum policy at Federal Government level began as early as 1933 when the National Industrial Recovery Administration, established under the Secretary of Interior, assumed regulation of interstate shipments of oil.¹ The importance of national policy for petroleum emergency planning was reflected by a delegation of functions conferred upon the President by Title I of the Defense Production Act of 1950, as amended, to provide by redelegation or otherwise for their performance by certain executive branch officials including the Secretary of the Interior (Executive Order 10480, as amended). It followed then that emergency preparedness policy, and plans and development of preparedness programs were specifically assigned to the Secretary of Interior (Executive Order 10997, February 16, 1962).

(2) During the Vietnam Era

(a) A study on emergency planning for petroleum was carried out at the request of the Secretary of Interior by a committee of the National Petroleum Council in 1949, and the latest findings emerged in 1964 with the "National Plan for Emergency Preparedness," a complete statement on nonmilitary defense planning for the country. Chapter 10 of the Plan, entitled "Fuel and Energy," provides general guidance on the assumed effects of attacks, the organization and responsibilities for meeting military and essential civilian requirements for oil and gas, actions to be taken in limited emergencies, and actions to be taken in a general war.

(b) The Emergency Petroleum and Gas Administration (EPGA), established 28 August 1963 by the Secretary of Interior, provided a standby organization to discharge certain Federal emergency responsibilities relative to oil and gas which were to be activated under certain conditions of emergency such as international tension, limited war, large-scale limited war, or general war. The EPGA would act on a coordinated basis to develop whatever policies and directives were required to provide the petroleum supplies needed for the war effort. When activated in a limited war situation, the objective of the Government emergency organizations would be to mobilize the country's resources behind the war effort. This means that the EPGA would probably function in much the same manner as its predecessor agencies—the Petroleum Administration for War in World War II and the Petroleum Administration for Defense in the Korean War. Figure 1 depicts EPGA's anticipated involvement in emergency situations. The EPGA was not activated during the Vietnam era.

b. DOD and Services' Policies

(1) Scope. The delineation and cognizance of petroleum matters was established by the Joint Chiefs of Staff (JCS) Memorandum of Policy No. 49, 6th Revision, 16 December 1966, which superseded the 5th Revision dated 30 October 1963.

(a) The memorandum set forth the policies regarding and assignment of responsibilities for the supply and distribution of all military bulk petroleum products and packaged fuels. The requirements for these products were contained in the petroleum slates submitted by appropriate heads of commands established by the Secretary of Defense. Nonslated items were to be handled through normal Service channels.

(b) The memorandum did not limit the authority of overseas commanders to assign operating responsibility within the means furnished them, nor did it limit the normal supply responsibilities of the Services except as specifically set forth in the memorandum.

¹ John W. Frey and Chandler H. Ide, A History of the Petroleum Administration for War, 1941-1945. Washington, D. C., Government Printing Office, 1946.

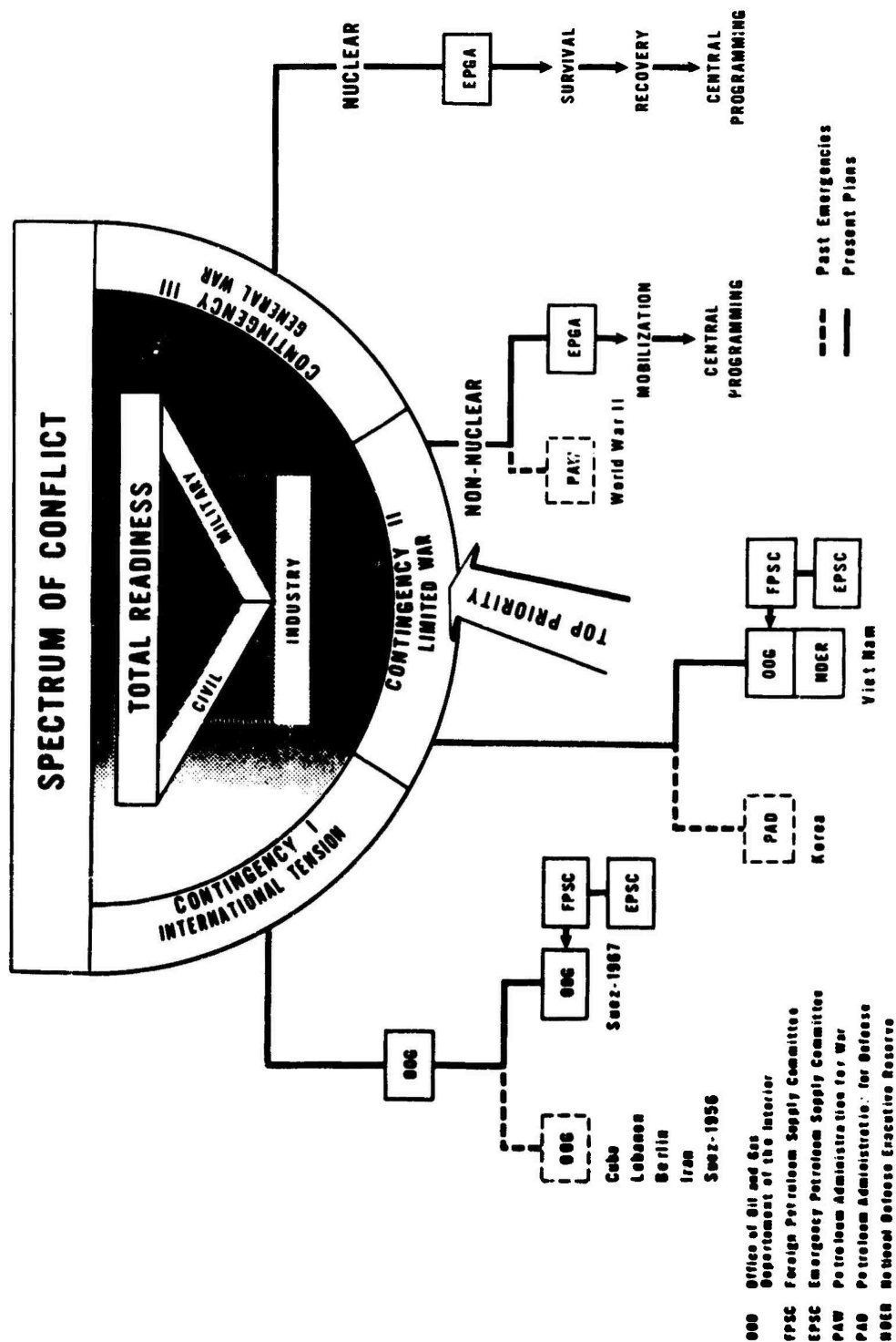


FIGURE 1. ANTICIPATED EPGA INVOLVEMENT IN EMERGENCY SITUATIONS

Source: Anticipated EPGA Involvement in Emergency Situations, National Petroleum Council, Washington, D. C., March 1966.

(2) Policies. The memorandum set forth the following policies:

(a) Standardization. Uniform simplified operating procedures, flexible supply organization, and interchangeable items of handling equipment shall be developed.

(b) Levels of Supply. Stock levels shall be kept in accordance with existing policy directives. Such prescribed stock levels shall be uniform among military departments where practicable and where similar conditions exist.

(c) Determination of Requirements. Requirements for military petroleum products shall be determined by the Services.

(d) Allocation. DOD Directive 4220.6 "Control of Petroleum During an Emergency" prescribes procedures and policies for controlling and allocating petroleum products within DOD during periods of international tension and during a limited or a general war. The directive states that peacetime POL policies, procedures, and responsibilities be continued insofar as possible. When allocation of POL products is necessary, the Assistant Secretary of Defense for Installations and Logistics is the DOD claimant on the Department of Interior for petroleum products required for the DOD. The Joint Chiefs of Staff are responsible for allocating petroleum products among the military departments.

(e) Supply Systems. Supply systems will provide for all practicable cross-servicing of petroleum products.

(f) Overseas Delivery. A single joint agency shall arrange for the delivery of bulk petroleum products and packaged fuels for overseas commands, utilizing facilities and services of the military departments. This single joint agency shall, without conflicting with the Service supply responsibilities, collaborate with the Services to ensure that there are no omissions or duplications.

4. DOD PETROLEUM ORGANIZATION AND RESPONSIBILITIES

a. Background

(1) The DOD had an organization during the Vietnam era with special features for providing petroleum for the Armed Forces. It was composed of civilian and military elements at various levels. Figure 2 is a diagram of those Federal Government agencies with major responsibilities in petroleum. Figure 3 shows the DOD activities in petroleum management. (See Appendix A for a detailed description of POL systems and Appendix B for a summary of the responsibilities and interrelationships of DOD POL components.)

(2) The resupply of petroleum for U. S. forces in Vietnam conformed basically to the Service and unified command lines, and was accompanied by close interrelationships among the Services' Inventory Control Points (ICPs), the unified commander's Joint Petroleum Offices (JPOs), Sub-Area Petroleum Offices (SAPOs), the DFSC, the Military Sea Transport Service (MSTS), and the commercial resources in and out of the petroleum industry including foreign-flag shipping. Figure 4 depicts the overseas organization for bulk petroleum resupply of U. S. forces. Appendix B details the interrelationships among the Services, unified commands, and the DSA.

b. Office of the Secretary of Defense

(1) At the start of 1965, there was a Director of Petroleum Logistics Policy in the OSD working under the Assistant Secretary of Defense for Installations and Logistics. His responsibilities included petroleum logistics policy pertaining to but not limited to procurement, production, distribution, transportation, storage, requirements, cataloging, standardization, disposal, and readiness planning. The Director established and provided guidance on policies,

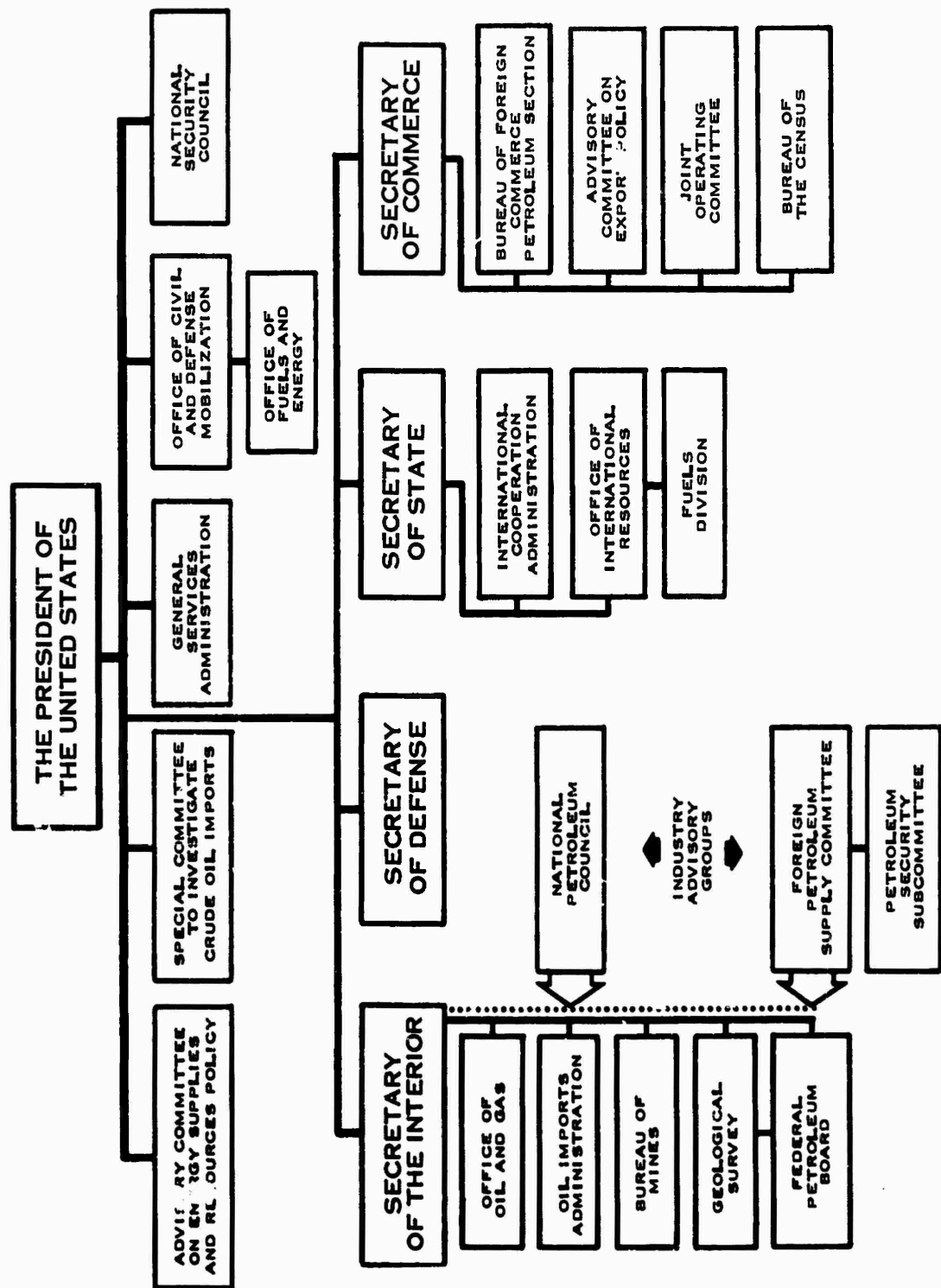
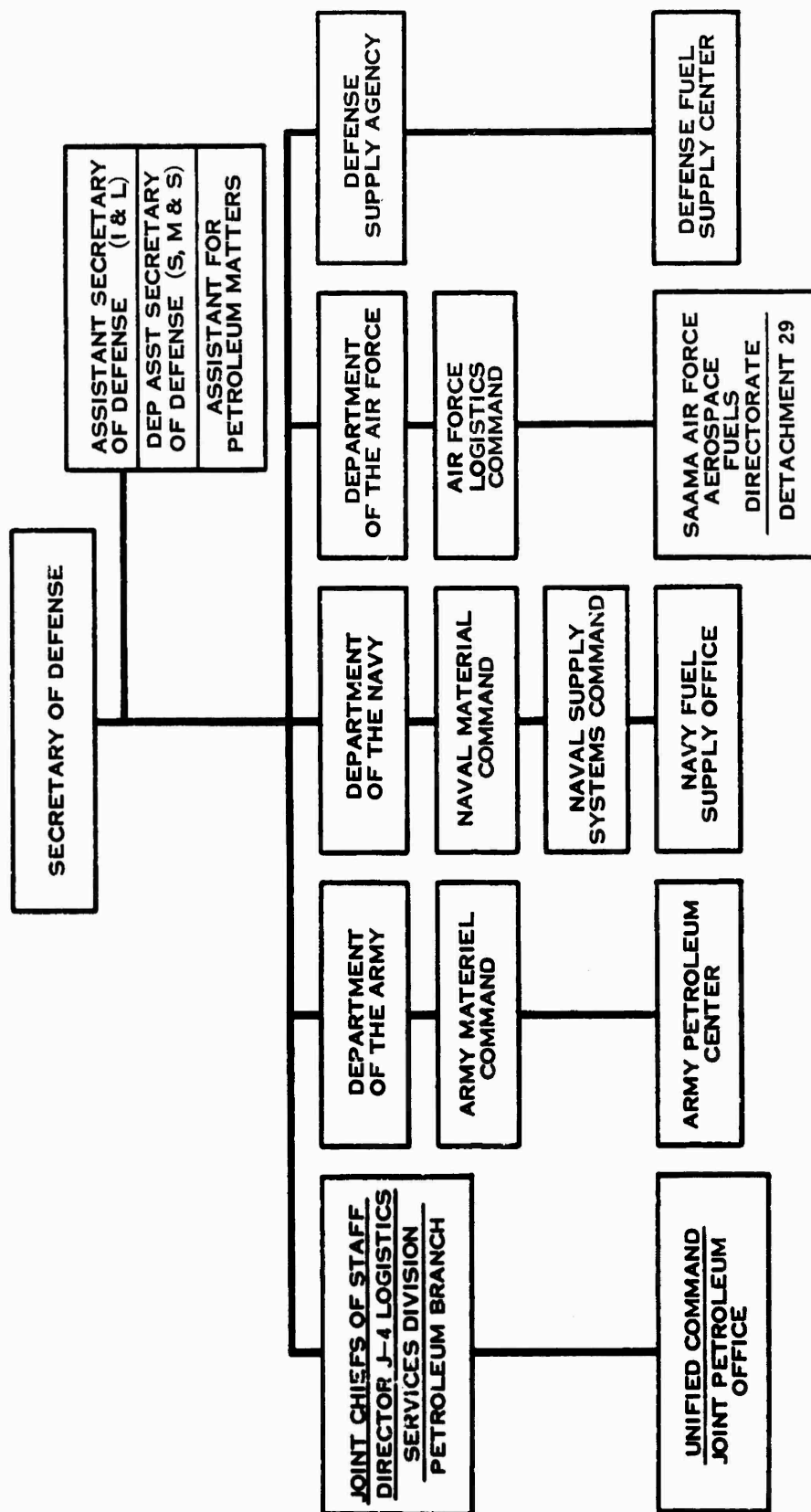


FIGURE 2. U. S. GOVERNMENT AGENCIES WITH MAJOR RESPONSIBILITIES IN PETROLEUM



POL

FIGURE 3. DOD ORGANIZATION FOR PETROLEUM MANAGEMENT

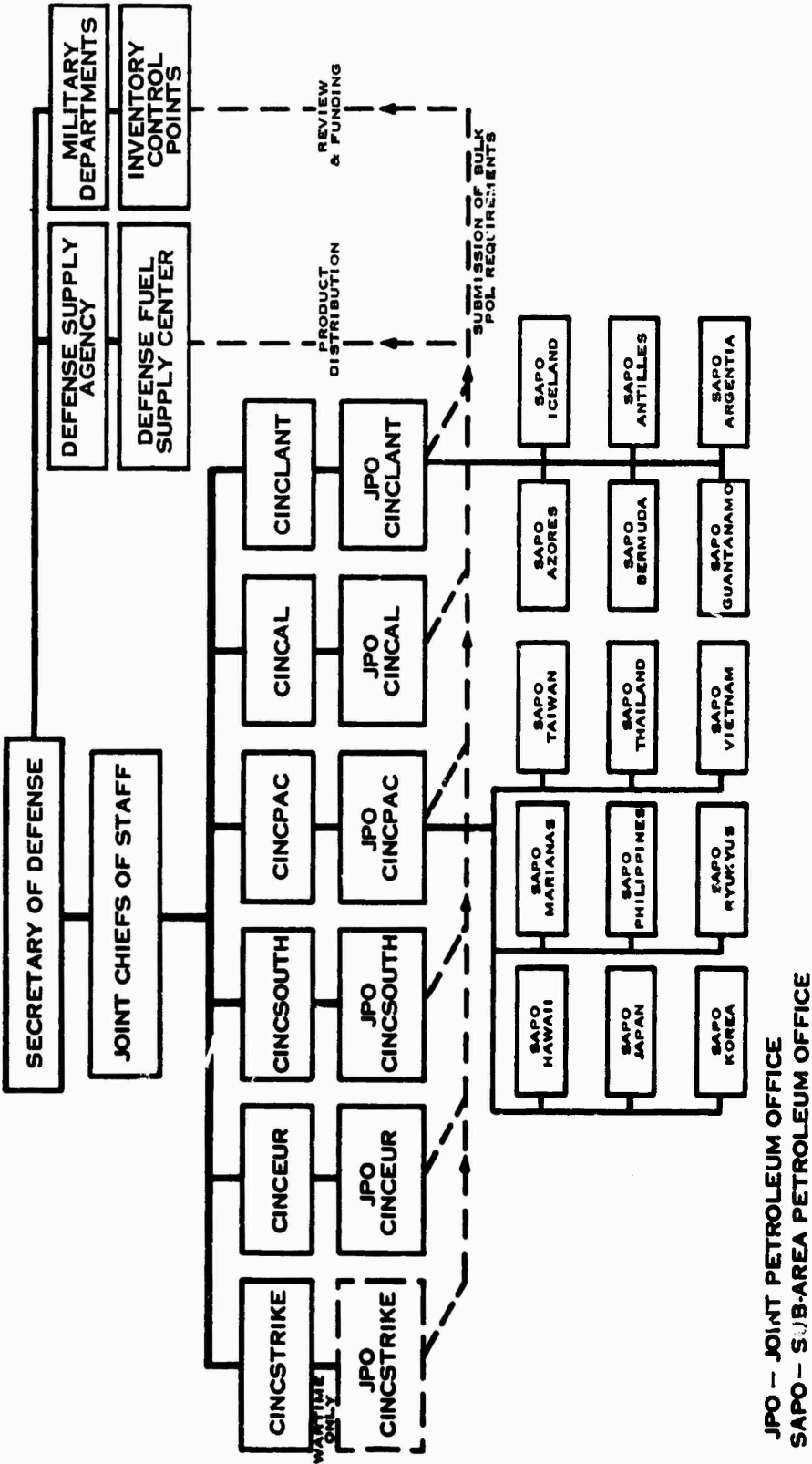


FIGURE 4. OVERSEAS ORGANIZATION FOR BULK PETROLEUM RESUPPLY OF U. S. FORCES

programs, systems, and procedures and ensured their effective implementation for sustained readiness and operation.²

(2) As a result of internal DOD reorganizations, the above office was disestablished on 30 June 1966, and in its stead, on 1 July 1966, the position of Special Assistant to the Deputy Assistant Secretary of Defense for Installations and Logistics for Petroleum matters was established. The Special Assistant was to provide policy guidance for the conduct of DOD petroleum systems and procedures. This organizational alignment continued throughout the Vietnam era.

c. Military Departments

(1) It was established that the Secretary of each military department was responsible for the supply management of bulk petroleum products, including the ownership and control of reserve and operating stocks, excepting those functions assigned to DSA.³ However, the determination of requirements, with respect to quality and quantity remained a responsibility of the using department or agency.⁴

(2) Primary responsibility for petroleum planning in support of general war was placed on the Services. Each Service, in coordination with the other Services and with the commanders of unified and specified commands, was to prepare plans as necessary for POL support within the continental United States (CONUS) and overseas areas. These plans were to include resupply schedules, as applicable.⁵

d. Unified Commands

(1) Commanders of unified and specified commands were responsible for:

- (a) Coordinating the supply of petroleum products.
- (b) Establishing a joint petroleum office.
- (c) Reviewing and consolidating current area military requirements for slated petroleum products.
- (d) Maintaining levels of supply established by the Services.

(2) Primary responsibility for petroleum logistic support was placed on the commander of the unified or specified command originating the basic plan.

(3) An example of the implementation of these responsibilities was the instruction issued by the Commander in Chief, Pacific (CINCPAC), that established a Joint Petroleum Office (JPO) and listed the responsibilities of that office. The responsibilities included:

- (a) "Maintaining levels of supply of POL (bulk POL and packaged fuels) as established by the services and commenting on the adequacy thereof (including POL storage, handling and distribution facilities related thereto) to the appropriate Service.

² Office of the Assistant Secretary of Defense (Supply and Logistics), Supply and Logistics Staff Notice Number 59/11, subject: Organization of the Office Petroleum Logistics Policy, 1 July 1959.

³ Department of Defense, DOD Directive 4140.25, Management of Petroleum Products, 6 January 1965.

⁴ Joint Chiefs of Staff Publication 5, Joint Logistics and Personnel Policy and Guidance (U), 1 March 1966 (CONFIDENTIAL).

⁵ Ibid.

POL

(b) "Planning for POL support to U. S. assigned Forces and Allied Forces available to the U. S. Commander for general war, limited war, and contingency plans.

(c) "Reviewing and consolidating current PACOM area military requirements for slated petroleum products (bulk POL and packaged fuel) and submitting these requirements for supply action in accordance with procedures established by the Defense Fuel Supply Center (DFSC).

(d) "Coordinating all matters pertaining to the supply of all military petroleum products within PACOM."⁶

(4) In addition to the primary function of the JPO of discharging staff petroleum logistics responsibilities to the commander concerned, these offices were given the specific function of "assistance to the Defense Fuel Supply Center (DFSC) in executing its charter responsibilities, as applicable."⁷

(5) Provision was made whereby, "Petroleum agencies of component commanders will assist the JPO in the accomplishment of the functions assigned to the JPO as required and directed by the commander of the unified command concerned."⁸

e. Defense Supply Agency

(1) The responsibilities of the Director of the DSA with regard to bulk petroleum products required him to:

(a) "Conduct or direct procurement of bulk petroleum items to meet the needs of the Military Departments and other authorized customers.

(b) "Contract for commercial petroleum services (such as storage and handling services, and into-plane contracts) on a worldwide basis, except that each Military Department may contract for into-plane refueling service at individual air stations and bases where the fuels are Government furnished.

(c) "Contract on a worldwide basis for bulk commercial petroleum storage required by the Military Departments and administer the contracts. DSA may delegate, when desirable, the contracting responsibility for commercial storage in specific overseas areas to overseas commanders through appropriate channels.

(d) "Coordinate the worldwide distribution system for the Department of Defense.

(e) "Select source and means of transportation to meet resupply requirements of bulk petroleum involving tanker movements.

(f) "Coordinate and arrange for required tanker transportation for the movement of military petroleum products in accordance with criteria and procedures established by the Executive Director, Military Sea Transportation Service.

(g) "Provide staff assistance and support to the Director, Petroleum Logistics Policy, ASD(I&L)."⁹

⁶ Commander in Chief, Instruction 4020.4E. Coordination of POL Matters, Within the Pacific Command. 30 December 1968.

⁷ Joint Chiefs of Staff, Memorandum 164-63, subject: Establishment of Joint Petroleum Offices (JPO). 1 July 1963.

⁸ Joint Chiefs of Staff Publication 3. Joint Logistics and Personnel Policy and Guidance (L). 1 March 1966 (CONFIDENTIAL).

⁹ Department of Defense, DOD Directive 4140.25. Management of Petroleum Products. 6 January 1965.

(2) The Director was also responsible for integrated supply management of packaged petroleum products.

(3) Along with the military services and other DOD components, the Joint Chiefs of Staff were required to "provide support and logistical planning information within their respective fields of responsibility to the Director, DSA, to carry out the assigned responsibilities and functions of the Agency."¹⁰

(4) The Chairman, Joint Chiefs of Staff, was one of the principal members of the Defense Materiel Council whose purpose was to "advise and assist the Secretary of Defense in the direction and control of DSA."¹¹

5. **SERVICE SYSTEMS.** The following paragraphs summarize the systems of the Services, which are described in more detail in Appendix A.

a. **Army.** The mission of the Army was to be capable of moving large volumes of POL over long distances in support of its equipment. The support of Air Force bases with aviation fuels constituted a large segment of the Army POL distribution requirement. A POL support system capable of delivering fuel over either developed or undeveloped land masses was required. The equipment requirements included invasion pipeline systems, tank cars, tank trucks, permanent and temporary bulk storage facilities, and 500-gallon collapsible drums. In addition, port facilities had to be enlarged, from the initial assault phase system using collapsible lines over the beach, to large ship-to-shore lines, buoys, and pipes for small and large tankers. Barges and Y-boats for local inland and coastal distribution were required. Standard airfield dispensing systems as well as air transportable dispensers were needed for servicing aircraft in undeveloped areas.

(1) The petroleum management system of the U. S. Army was a decentralized system, organized to provide efficient and economical response to customer requirements worldwide and to supply and distribute petroleum products for Army and Army-supported forces in a variety of environments and missions. The overall management system was structured so as to permit transition from a peacetime to a wartime situation with a minimum of change in procedures. The management of bulk petroleum products and packaged fuels was unique in that they were handled in a supply and distribution system exclusively designed for and peculiar to these items. The concept for management and resupply of packaged petroleum products paralleled that of other commodities under the Military Standard Requisitioning and Issue Procedure (MILSTRIP) system. The system envisioned the detailed involvement of local commanders in a management process. It allowed the local commander flexibility of operations and also provided the means of supplying logistic intelligence data to higher levels of management.

(2) The Deputy Chief of Staff for Logistics (DCSLOG), Department of the Army (DA), had primary responsibility for development and administration of the Army petroleum management system by providing broad general policy guidance relating to DA petroleum logistics functions and by establishing priorities for allocation of petroleum products and supporting services as necessary.

(3) Logistics responsibilities of the U. S. Army Materiel Command (USAMC) included the development and operation of the Army wholesale logistics system.¹² A portion of their responsibility involved providing for the supply and distribution of petroleum, petroleum storage and handling equipment, and the technical assistance program.

(4) The U. S. Army Petroleum Center (USAPC), a field agency under the command of USAMC, was designated as the Army inventory control point for the supply of petroleum and

¹⁰ Department of Defense, DOD Directive 5105.22, Defense Supply Agency, 9 December 1965.

¹¹ Ibid.

¹² Department of the Army Regulation AR 10-11, U. S. Army Materiel Command, 27 June 1968.

related products. The USAPC responsibilities included the determination of peacetime and mobilization quantitative requirements, the computation of worldwide Pre-positioned War Reserve Stocks (PWRS), the management and control of CONUS PWRS, the preparation and defense of stock fund budget estimates, the development of worldwide standard pricing for bulk petroleum items, monitoring the worldwide technical assistance program, and such other management functions as the direction of distribution, redistribution, and disposal.

(5) Development of qualified operating personnel resulted from repetitive assignment of both officers and enlisted personnel in petroleum logistics, following formal training in both government and civilian educational institutions.

(6) Each Army component commander overseas achieved operational responsiveness in petroleum operations by centralized planning and by using decentralized operations at lower level headquarters. Through his G-4 staff, he was responsible for preparation of overall plans and policies for supply and distribution of petroleum products and related facilities and equipment, seeking DA approval as required.

(7) For example, in U. S. Army, Pacific (USARPAC), the Army's petroleum operational logistic system interfaced with the unified command at CINCPAC and its other component commands. The Army commands in the Western Pacific, based on forecasts made by elements within those commands, submitted monthly resupply requirements projected 5 months in advance to the appropriate major CINCPAC subordinate commands having Sub-Area Petroleum Officers on their staffs.

(8) In Vietnam, the component command, U. S. Army, Vietnam (USARV), had assigned petroleum logistics functions to its operating agency, 1st Logistical Command, when established in March 1965. To fulfill this mission, 1st Logistical Command had organized support commands responsible for all logistics support in specified locations. Each of the support commands had a staff member in petroleum. A petroleum battalion headquarters was assigned to each support command for the control of petroleum supply units.

b. Navy. The prime concern of the Navy was the support of the fleet with emphasis on underway replenishment by means of mobile support ships (fleet oilers) used to extend the radius and the time of the fleet in the operating area. In addition, the Navy was responsible for providing fuel from ship to shore for the Marines which required a ship-to-shore assault system; airfield dispensing equipment; air-to-air refuelers for aircraft; and barges, small oilers, and other shallow-draft vessels for resupply of forces along coastal and inland water ways.

(1) Developed primarily to support Navy Operating Forces, the Navy POL logistic system basically followed the overall Navy logistic system. (This system is described in Chapter 3 of Volume II.) It had the advantage of using, in the day-by-day worldwide operations of Navy ships and fleets, the same support concepts in peace as in war. This even extended to the policies in the deployed fleets that the ships be fueled normally at sea by the underway replenishment force, and topped off before entering port.

(2) Within the overall Navy logistic system, recognition was given to the unique nature of petroleum products and their criticality to the operation of ships and aircraft. Experienced officers were assigned to the staffs of responsible commanders, and special training was given to personnel involved in POL duties, ashore and afloat.

(3) In command of the operating forces of the Navy, the Chief of Naval Operations had overall responsibilities for the readiness and performance of these forces, including those assigned to the operational control of unified and specified commanders. He was responsible for coordination and direction of the efforts of the bureaus and offices of the Navy Department to effectuate availability and distribution of material required by the Operating Forces of the

Navy where and when they were needed.¹³ He was specifically charged with planning and determining the material support needs of these operating forces.¹⁴ These responsibilities applied to POL as well as other material.

(4) The responsibilities of the Bureau of Supplies and Accounts for the administration of the Navy Supply System included POL. Under the bilinear system as it existed on 1 January 1965, the Bureau was under the Chief of Naval Material whose primary responsibilities were to the Secretary of the Navy. In accordance with a previous plan unrelated to the Vietnam conflict, the Chief of Naval Material was placed under the Chief of Naval Operations on 1 April 1966, and the Bureau was renamed the Naval Supply Systems Command.

(5) Fuel storage facilities in CONUS and Hawaii were under the command of this bureau. When in the vicinity of a Naval supply center these facilities were in turn under that center.

(6) The Navy Fuel Supply Office, collocated with the DFSC, was a field activity of the bureau. Its responsibilities to the bureau included that of budget, storage, replenishment, procurement inspection assigned to the Navy, technical assistance for Navy POL on a worldwide basis, and inventory management controls based on approved levels of war reserve stocks and operating stocks.¹⁵ The levels were computed by the Navy Fuel Supply Office in accordance with the guidance on force levels and ship operating profiles from the Office of the Chief of Naval Operations. These levels were sent out to the Commanders in Chief of the Atlantic and Pacific Fleets and other operational commanders for review and comment prior to final approval. Thereafter, the Navy Fuel Supply Office monitored these levels for the Chief of Naval Operations.

(7) Annual usage rates prepared by the Bureaus of Ships and Aeronautics formed the basis for the Navy Stock Fund budget. With the institution of Resource Management on 1 July 1968, funding responsibilities were transferred from the System Commands (Bureaus) to the fleet commanders and other operational commanders who then provided their own forecasts of usage and funding requirements.

(8) Upon receipt of annual forecasts from field activities and similar estimates from Navy area commanders for worldwide bunkering needs by local purchase, an estimate of bulk product requirements was submitted by the Navy Fuel Supply Office to the DFSC to provide the Navy portion of the DOD annual fuel procurement.

(9) The fleet commanders were responsible to the Chief of Naval Operations for the operational logistic support of their forces and shore activities. They exercised their POL responsibilities through their service force commanders, who were responsible for overseas depots which stored and issued POL; naval support activities; fleet oilers (AO, AOE, AOR); the underway replenishment forces; and the smaller oilers (AOGs) which were specially qualified for support of amphibious landings and maintenance of ship-to-shore lines.

(10) In Vietnam, the responsibilities of Commander in Chief, Pacific Fleet (CINCPACFLT), for providing common POL support in the I Corps Tactical Zone (CTZ), as assigned by the Commander in Chief, Pacific (CINCPAC Msg 180039Z), were carried out by the Commander, Naval Support Activity, Da Nang, under Commander, Service Forces, Pacific (COMSERVPAC). These responsibilities included operating the fuel complex in Da Nang and ship-to-shore lines throughout the zone.

¹³ U. S. Navy Regulation, Chapter 2, paragraph 0202.4, 1948.

¹⁴ Department of the Navy, General Order No. 5. Assignment and Distribution of Authority and Responsibility for the Administration of the Department of the Navy, 29 April 1966.

¹⁵ Navy Supply Instruction 5450.29 D, Functional and Material Mission Statement of Navy Fuel Supply Office, Alexandria, Virginia, 17 November 1966.

(11) The Navy's POL operational logistics system interfaced with the unified chain of command at two levels: the CINCPACREPPHIL-RYUKYUS level and at the component command and headquarters, CINCPAC level.¹⁶ The overseas supply activities submitted monthly resupply requirement slates, based on forecasts from fleet units and other users, to the Sub-Area Petroleum Offices for the current month and a 4-month projection. These slates, the levels of supply and underway replenishment operations, were continuously monitored by the Commander, Service Force, who took action, for the fleet commander, with the Commanders in Chief when necessary to ensure adequate and timely resupply.

c. Marine Corps. The Marine Corps developed its operational POL system to provide support in an assault environment. The Navy was responsible for providing fuel to the high-water mark into the Amphibious Assault Fuel System. The Marine Corps system provided bulk storage in 10,000 gallon collapsible fuel tanks. For support of the Marine Air Wings, a Tactical Airfield Dispensing System was used with 10,000-gallon collapsible tanks. Assault pipeline was included to connect the Amphibious Assault Fuel System storage with the airfield storage. Limited numbers of tank trucks were required to move bulk products over land to armored units, personnel carriers, and outlying helicopter landing sites.

d. Air Force. The major mission assigned to Air Force activities was on-base POL support where the Air Force was predominant user. However, equipment requirements for permanent bases were not always in position when forces were deployed, and base equipment such as airtransportable fuel dispensing systems, aerial bulk-fuel delivering systems, and rubber fuel storage tanks were required in addition to standard mobile servicing equipment. These systems were also used to support other U.S. and allied forces that required aerial delivery of fuels at remote and forward operating locations. When standard aerial-fuel delivery systems were not available, the wet-wing method of fuel transport was employed along with the use of various sizes and types of collapsible tanks. A major portion of the fuels used by the Air Force at fixed installations was delivered from marine terminals by Army and Navy inland distribution systems using available pipelines, tank trucks, rail cars, barges, and collapsible tanks.

(1) Petroleum management in the Air Force was similar in many respects to management of other commodities in the overall logistics system. Its orientation was directed toward base operations support or retail service. The system was organized and managed in such a manner as to provide the operational commander with control of all the resources necessary to perform his mission.

(2) The unique nature of petroleum, its management requirements, and the criticality of petroleum to all Air Force operations were recognized, and a management system was established to cope with this particular commodity. Petroleum management in the Air Force was exercised at each principal level of command from Headquarters, Air Force, down to base level. At each level, commanders were provided with qualified officers and airmen specialists that were trained specifically in petroleum operations. Many of the officers and airmen trained and assigned duty in the area of fuel utilization stay in this particular career field throughout their Air Force careers. This particular feature of Air Force petroleum management has provided the highly qualified officers and senior noncommissioned officers required to supervise more than 9,000 people in this function Air Force-wide. The petroleum staffs at Headquarters, Air Force, and at the major air commands performed the same general functions as other commodity specialists in the areas of formulating policy, furnishing guidance to lower echelons, and exercising staff supply and operational management for matters pertaining to petroleum, propellants, and chemicals.

(3) In addition to the operational command, petroleum responsibilities associated with petroleum activities at bases of his command, the Commander, Air Force Logistics Command (AFLC), was also tasked to provide petroleum logistic support for all other U.S. Air Force activities.

¹⁶ CINCPACREPPHIL-RYUKYUS is the acronym for Commander in Chief, Pacific Representative for the Philippines and for the Ryukyus. respectively.

(4) The inventory management function in AFLC was accomplished by the Director of Aerospace Fuels. As head of the ICP organization, the Director and agencies under his control supported all commands of the Air Force by performing such functions as determination of requirements to support peacetime and wartime operations; initiation of procurement actions; arrangement for the distribution of products; management of retail distribution stations; monitoring of quality control of Air Force-owned budget; financial and property accounting; stock control; fuels, stock fund management; and other functions relating to petroleum, propellants, and chemicals. In CONUS, fuels field offices and a detachment of personnel collocated with the DFSC performed many of these functions. In overseas areas, the fuels staff personnel at major air commands and individual locations acted as contract monitoring points and assist the ICP in the performance of its duties.

(5) The AFLC, the ICP, and the major air commands worked together in planning the requirements for establishing, maintaining, and monitoring the war readiness POL reserve program and the peacetime stock support programs for POL. These requirements were based on past consumption, programmed flying hours, and planned wartime aircraft activity data provided by Headquarters, Air Force.

(6) When the POL requirements were known, AFLC and ICP prepared and forwarded, Operating Programs and Operating Budgets to Headquarters, Air Force, for approval. Approved Programs and Budgets for funding in General Support or Fuels Division of the Air Force Stock Fund were then monitored by AFLC to ensure that activities were within established limitations. ICP arranged with the DFSC for the procurement of products to meet the requirements of activities supported.

(7) In most cases, the Air Force did not have the organic capability to move products from its source to the bases. Therefore, it relied heavily on commercial, host country, international agencies, the Army, or the Navy for this type of support. The few places that the Air Force was self-supporting in inland transportation of fuels was in overseas areas such as Greenland, Labrador, Spain, Libya, Turkey, Atlantic Islands, and occasionally Taiwan.

(8) Whenever possible, the total peacetime and wartime POL requirements were stored on the base of intended use or at nearby dispersed locations. When this storage was not possible, ICP attempted to satisfy the storage requirements by using other Air Force, Army, Navy, host country, or commercial facilities until such time as additional storage could be made available through military construction programs submitted by the activity needing the storage.

(9) Finally, the base commander that was responsible for deploying the fighting force was normally only responsible for receiving, storing, maintaining accountability, and servicing products into aircraft at his installation. The Base Fuels Management Officer at each base performed these functions with assigned fuel specialists.

6. INTERSERVICE SUPPLY SUPPORT

a. The most effective and economical means of providing certain types of POL support in an area often was for one Service to support all or part of another Service's requirements. When practiced on a recurring basis, such arrangements were formalized by an Interservice Supply Support Agreement between the activities involved.¹⁷

b. Interservice support was practiced to some degree in all functional areas of POL logistics when such action resulted in an increase in overall effectiveness and/or economy. The particular support rendered could be based on tasks directed by organizational charters or mutual agreements established by the receiver and supporting activities. Normally the

¹⁷Department of Defense, DOD Directive 4000.19, Basic Policies and Principles for Interservice and Interdepartmental Logistic Support, 5 August 1967; Joint Defense Supply Agency and Services Directive DSAM 4140.4, AFM 67-5, AR 700-39, MCO P7020.7 and NAVSUP PUB 5007, Defense Retail Interservice Logistic Support Manual, January 1965.

responsibility for providing interservice support was assumed by the principal consumer in an area, or the activity that had a unique capability not available to another Service.

c. Interservice support agreements provided a flexible system whereby responsibilities and relationships of the command being supported and the supporting command were set forth and were generally executed at the lowest command level possible. Requests for interservice support were forwarded to higher headquarters only when required by Service or departmental policy or when manpower or fund resources were required in excess of those provided to the local command. Along with the standard directed and/or mutually agreed on interservice support (i.e., Army POL support to II, III, and IV CTZ and Navy I CTZ), many interservice support actions were never formalized by written agreement. Some of these support actions included delivery of bulk fuels by the normal aerial delivery system or by wet-wing transfer to operational units unable to obtain fuel by conventional means; and provision of equipment and/or components for fuel storage, transfer, and dispersal to another Service to meet their immediate operational needs. Generally, interservice support among field operating service commands was limited only by available assets within their organic capabilities.

d. As an example of charter-directed support, the DSA, through DFSC, provided support for all Services by worldwide procurement of POL products and services, by coordinating tanker transportation for POL, and by performing cataloging and standardization functions.¹⁸

e. The Air Force arranged for into-plane fuel and oil-servicing contracts for all Services by receiving, computing, and consolidating all such requirements and forwarding the necessary Military Interdepartmental Purchase Request for such services to DFSC.¹⁹

f. In CONUS, the Military Traffic Management and Terminal Service furnished Government and commercially owned rail cars, awarded contracts, and negotiated and/or approved common-carrier rates for movement of Government-owned products.²⁰

g. The Joint and Sub-Area Petroleum Offices provided support for component commanders through the submission of slates which provided the DFSC with coordinated requirements for all military services for bulk petroleum and packaged fuels in their area of responsibility.²¹

h. The MSTs, as single manager for ocean transportation, provided or otherwise arranged for tankers for movement of bulk POL as requested by DFSC.²²

i. In almost every overseas area where significant U.S. military forces existed, one of the Services had agreed to provide distribution support for bulk and/or packaged fuels to all forces operating in the area.

j. Each Service had agreed to accept the responsibility for manning and operating petroleum laboratories in a specific overseas area. These laboratories served all Services in the respective area and were equipped and manned to perform tests on all products used in the area. In addition to quality surveillance for the Service concerned, at least one laboratory in

¹⁸Department of Defense, DOD Directive 4140.25, Management of Petroleum Products, 6 January 1965.

¹⁹Joint Service Directive DSAM 4220.1, AR 700-9100-5, AFR 67-142, MCG 10340.16, and NAVSUP PUB 5005, Operating Procedures for Bulk Petroleum and Coal Products, December 1963.

²⁰Joint Service Directive DSAR 4500.3/AR 55-355/AFM 75-2/MCO P4600.14/NAVSUP PUB 444, Military Traffic Management Regulation, January 1964.

²¹Joint Chiefs of Staff, Memorandum MJCS-164-63, subject: Establishment of Joint Petroleum Officer (JPO), 1 July 1963.

²²Department of Defense, DOD Directive 5160.10, Single Manager for Ocean Transportation, 24 March 1967.

each major area was equipped to perform the necessary procurement acceptance tests on every bulk fuel and lubricant in the area.²³

k. The Army provided, on a common support basis, common-use, military-operated land transportation in overseas areas including road, rail, and pipeline, except when the overseas commander concerned directed otherwise. Inherent with the Army's responsibility for overseas road, rail, and pipeline operations were the responsibilities for the operation of required port or offshore discharge facilities, terminals, operating tankage, and loading and discharge facilities.²⁴

7. RELATIONSHIPS OF THE MILITARY DEPARTMENTS, SERVICES, UNIFIED COMMANDS, AND DEFENSE SUPPLY AGENCIES, PETROLEUM MANAGEMENT AND COMMAND RESPONSIBILITIES

a. A high degree of effectiveness and responsiveness of POL logistics during the Vietnam era was made possible by the fact that, although management of POL was given specialized attention, there was no fragmenting of the responsibilities of the military departments or those of the chains of command of the Services and unified commands.

b. Also contributing to the high degree of effectiveness and responsiveness of POL logistics during the Vietnam era was the fact that the Secretaries of the military departments were responsible for funding, and the ownership of stocks gave them the means required to carry out their basic responsibilities for support of their forces, including control of pre-positioned war reserve stocks and operating stocks. Drawdowns of war reserve stocks were limited by the Services to those needed to accommodate operations, and the stocks were promptly replenished. Reprogramming of Operations and Maintenance funds took place at various levels in the Services' chains of command to meet the changing POL needs of dynamic warfare. To accommodate increased fuel consumption in support of Vietnam, within available funds, limitations were from time to time placed on flight and steaming hours. However, never being implemented in Vietnam or in any part of Southeast Asia, these limitations had no impact on the Vietnam conflict.

c. The changing requirements of the Services in the Pacific were coordinated and consolidated on an area-wide basis by CINCPAC, in accordance with his basic responsibilities. Under him, resupply requirements were consolidated on a subarea basis, after the demands on storage within these subareas by mobile forces, e.g., naval and air forces, as well as local activities had been taken into account. These requirements were updated monthly, and accompanied by 4-month forecasts. Unforeseen variations, such as those which resulted from redeployment of forces and changes in the tempo of operations, were met with requests and forecasts by responsible commanders of the operating forces of the Services. Additional changes resulted from actions of Service component commanders who monitored the asset situation and forecasted changing requirements. These actions were through the commander of the unified command who exercised overall coordination and submitted resupply requirements to the DSA/DFSC. The latter arranged with the MSTs for tanker delivery to the main storage points. When emergencies arose, diversions of shipments resulted from requests by the component commanders to the unified command. The tanker scheduling arrangement was one that would have facilitated the extraordinary controls required in case of a war at sea.

8. RESPONSIBILITIES FOR MILITARY POL SUPPLY SYSTEM IN VIETNAM. The basic responsibilities were assigned by CINCPAC Message 180039 of July 1965.²⁵ This message provided that:

²³Joint Service Directive AFR 67-46, AR 700-36, BUSANDINST 4730.1, and MCOP 4760.1, Quality Surveillance and Laboratory Facilities for Petroleum Products in Overseas Areas, 20 September 1956.

²⁴Joint Service Directive AFR 75-95, AR 55-15, and OPNAVINST 4640.3, Land Transportation in Overseas Areas, 28 March 1955.

²⁵Commander in Chief, Pacific, Message 180039Z, subject: POL Support RVN, July 1965.

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a. Each Service component commander is responsible for the logistic support of the forces of his Service assigned to CINCPAC. These responsibilities may be modified through application of single-service support assignments or by concluding mutually agreeable arrangements for interservice support and joint use of facilities.

b. The Commander in Chief, U. S. Army, Pacific (CINCUSARPAC), through Army subordinate commands, provide and operate an in-country POL terminal and distribution system to augment or replace commercial systems, where and when necessary for the receipt, storage, and issue of bulk and packaged POL common items for U. S. and attached third-country forces in the Republic of Vietnam (RVN) south of the Chu Lai area; and, as an expediency, provide POL support to RVN forces should commercial supply fail and the Commander, U. S. Military Assistance Command, Vietnam (COMUSMACV), so direct; and provide and operate on-base storage and dispensing systems at airfields primarily designated for Army use.

c. CINCPACFLT, through Navy subordinate commands, provide and operate an in-country POL terminal and distribution system to airfields and distribution points (for pickup by units in organic equipment) to augment or replace commercial systems, where and when necessary for the receipt, storage, and issue of bulk and packaged POL common items for U. S. and attached third-country forces, covering an area from Chu Lai to the Demilitarized Zone, and, as an expediency, provide POL supply to RVN forces should commercial supply fail and COMUSMACV so direct; and provide and operate on-base storage and dispensing systems for airfields primarily designated for Navy and Marine Corps use.

d. CINCPACAF provide and operate on-base storage and dispensing systems at airfields primarily designated for USAF use, and provide operating and reserve product requirements to supporting commands as desired by COMUSMACV.

e. These assignments of responsibility were not to infringe on COMUSMACV's authority and responsibility for overall coordination and direction of in-country POL support, rather it was intended to clearly delineate the responsibilities of CINCPAC Service components to provide the support COMUSMACV required.

CHAPTER III
OVERALL REVIEW OF POL
SUPPORT OF VIETNAM CONFLICT

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OVERALL REVIEW OF POL SUPPORT OF VIETNAM CONFLICT

1. **INTRODUCTION.** This chapter reviews petroleum, oil and lubricants (POL) support in the Vietnam conflict to provide background facts relevant to the treatment of areas of investigation and discussion in succeeding chapters. Rather than covering every facet of such support, an effort is made to place emphasis on those areas important to the identification of strengths, weaknesses, and lessons learned. The bulk and packaged POL support in the Vietnam conflict presented in this chapter highlights the many and varied aspects of providing POL to the operating forces.

a. The support of U. S. and free world forces in Vietnam highlighted many of the peculiar characteristics of petroleum logistics that must be dealt with in an underdeveloped area. The lack of adequate facilities to receive, store, and distribute bulk fuels and long lines of supply had varying impacts on the abilities of the Services to support their forces and to accomplish other assigned supporting tasks. Operations in Vietnam pointed out the close interrelationship of all functional aspects and the unique support capability required of each Service that was necessary for delivery of fuel under all possible conditions of combat. POL support in Vietnam was more difficult perhaps than support in a more developed area, mainly because many of the basic necessities required did not exist until long after forces had been committed.

b. During the buildup of a POL support capability, activities involved in support operations found it necessary to use available resources or assets to accomplish the mission even though such actions may have proved more costly over a long period of time. This situation was especially true in the areas of storage and distribution. Since sufficient storage did not originally exist nor was it made available within a reasonable period of time, other actions became necessary to make up for this deficiency. Extensive use of small, rubberized containers for bulk storage; extensive use of all sizes of tankers and improvised equipment for coastal and inland distribution; use of offshore and over-the-beach offloading systems; transshipping and backhauling of fuels; and the use of fleet oilers to offload tankers at sea rather than sail long distances to a fleet support activity to reload were actions taken to compensate for POL deficiencies. In most instances, if adequate storage had been made available, it would not have been necessary to rely on these extreme practices for long periods of time. Adequate storage can compensate for many of the variables, such as weather, tanker slippage, enemy actions, and unanticipated high consumption, that affect resupply operations. However, the lack of storage does have a pronounced effect by placing unnecessary demands on all other functional areas of petroleum logistics from the refinery down to the user, via the complete logistic chain.

2. **SOURCE OF BULK PETROLEUM FOR MILITARY OPERATIONS.** The source of fuels for military operations was mainly determined by the availability of crude oil, refining capability, and the balance-of-payment considerations. These factors generally established the supply and distribution patterns for all military products worldwide. Frequently, the source of supply affected other functional areas of POL operations such as mode of transportation used; type, size, and ownership or control of tankers used; supporting storage and offloading facilities needed; and the need for floating storage and shuttle tankers.

a. **Worldwide Supply Pattern.** The distribution patterns shown in Figures 5 through 11 have remained basically the same since the buildup in Southeast Asia began, changing only to meet the large and growing demand for JP-4 in the Western Pacific (WESTPAC) area and limitations of sources caused by the Arab-Israeli War of 1967.

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(1) The United States, including Alaska and Hawaii, was supplied, except for Navy Special Fuel Oil (NSFO), mostly from indigenous refineries situated throughout the United States. The principal crude oil producing and refining area in the United States was the U.S. Gulf which often made up for deficits on the U.S. east and west coasts. The west coast was basically self-sufficient with respect to NSFO; however, occasionally it had to be supplemented by supplies from the Caribbean. Virtually all NSFO requirements for the Gulf and east coast areas were supplied from the Caribbean.

(2) The Atlantic and European areas were supplied mostly from the U.S. Gulf except for NSFO which was supplied from the Caribbean.

(3) Requirements for the Sixth Fleet were furnished from refineries in the Mediterranean area.

(4) Significant but relatively small quantities of products were also obtained from refineries in a number of crude-deficient areas such as Japan, Taiwan, Korea, the Philippines, Northern Europe, and the Mediterranean area.

(5) The Arabian Gulf provided most of the products needed for military operations in the WESTPAC area except for Aviation Gasoline, JP-4, and JP-5. Supplies of these three products were shipped from the U.S. Gulf and the Caribbean.

b. Impact of the Arab-Israeli War of 1967. In FY 67, approximately two-thirds of the military products used in Vietnam and one-half of the products used in other WESTPAC areas originated from Arabian Gulf sources. Thus, with little warning, a potentially severe shortage of petroleum for Vietnam and the WESTPAC area was imminent. Although all sources in the Arabian Gulf were not terminated, approximately 217,000 barrels of products a day had to be supplied from the U.S. Gulf and/or Caribbean sources to make up the deficit. This sudden change in source created an immediate shortage of tankers and aggravated the problem of scheduling tankers for the resupply of the limited storage capacity in Vietnam and other WESTPAC areas. However, serious difficulties in maintaining a flow of products into Vietnam were not encountered because early and emergency procurement of replacement quantities of fuels had been directed by the Assistant Secretary of Defense,¹ and the sanctions imposed against the United States by Arab countries were not continued for an extended period. During the period of adjusting to new and longer supply lines from the new sources, the Services were allowed to use Pre-positioned War Reserve Stocks (PWRS) as required. The drawdown of such stocks was limited, and these stocks were reestablished in a short period of time.

3. BULK POL OPERATIONS IN VIETNAM AND IN SUPPORT OF THE SEVENTH FLEET

a. Early Support (Commercial)

(1) In the beginning of 1965, the U.S. military had little in-country POL logistic support capability. Coastal, inland waterway, and overland transportation of bulk products, drummed fuels, packaged lubricants, greases, and into-plane services were all provided by commercial suppliers. The in-country contractors made all deliveries, even those required in remote areas. There was no refinery in Vietnam, and the oil industry was comprised of three international oil companies: Esso, Shell, and Caltex. The facilities of these three companies were mainly situated at Nha Be, 9 miles south of Saigon. Although contiguous at this location, each had separate and independent systems and facilities. Supply lines that stretched from the Arabian Gulf and Caribbean area, via facilities in Singapore, were the sole means of support for U.S. military forces in Vietnam.

¹ Assistant Secretary of Defense for Installations and Logistics. Memorandum, subject: Shift of POL purchases from Persian Gulf to U.S. and Caribbean Sources, 7 June 1967.

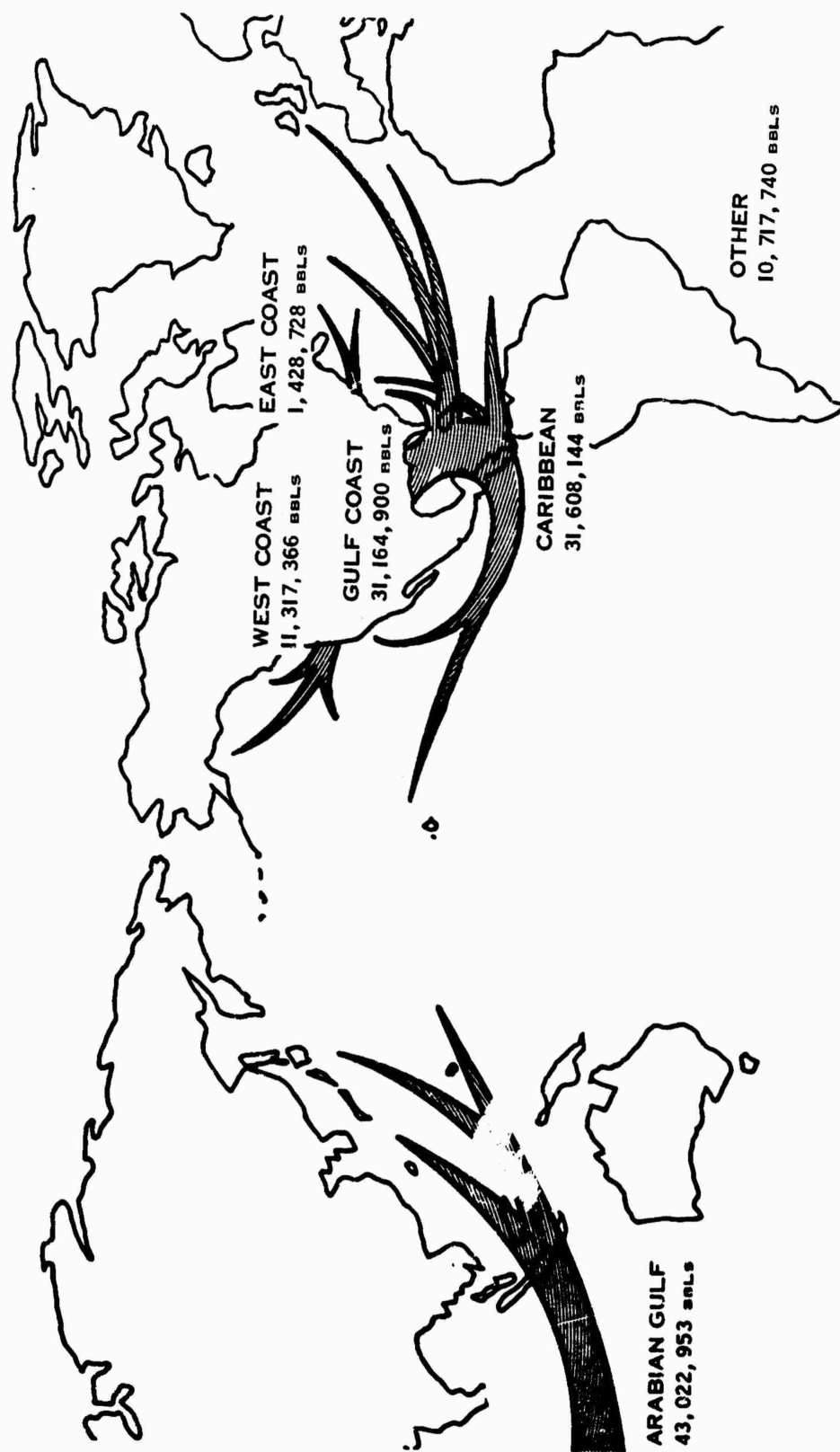


FIGURE 5. MILITARY TANKER LIFTINGS—FISCAL YEAR 1965



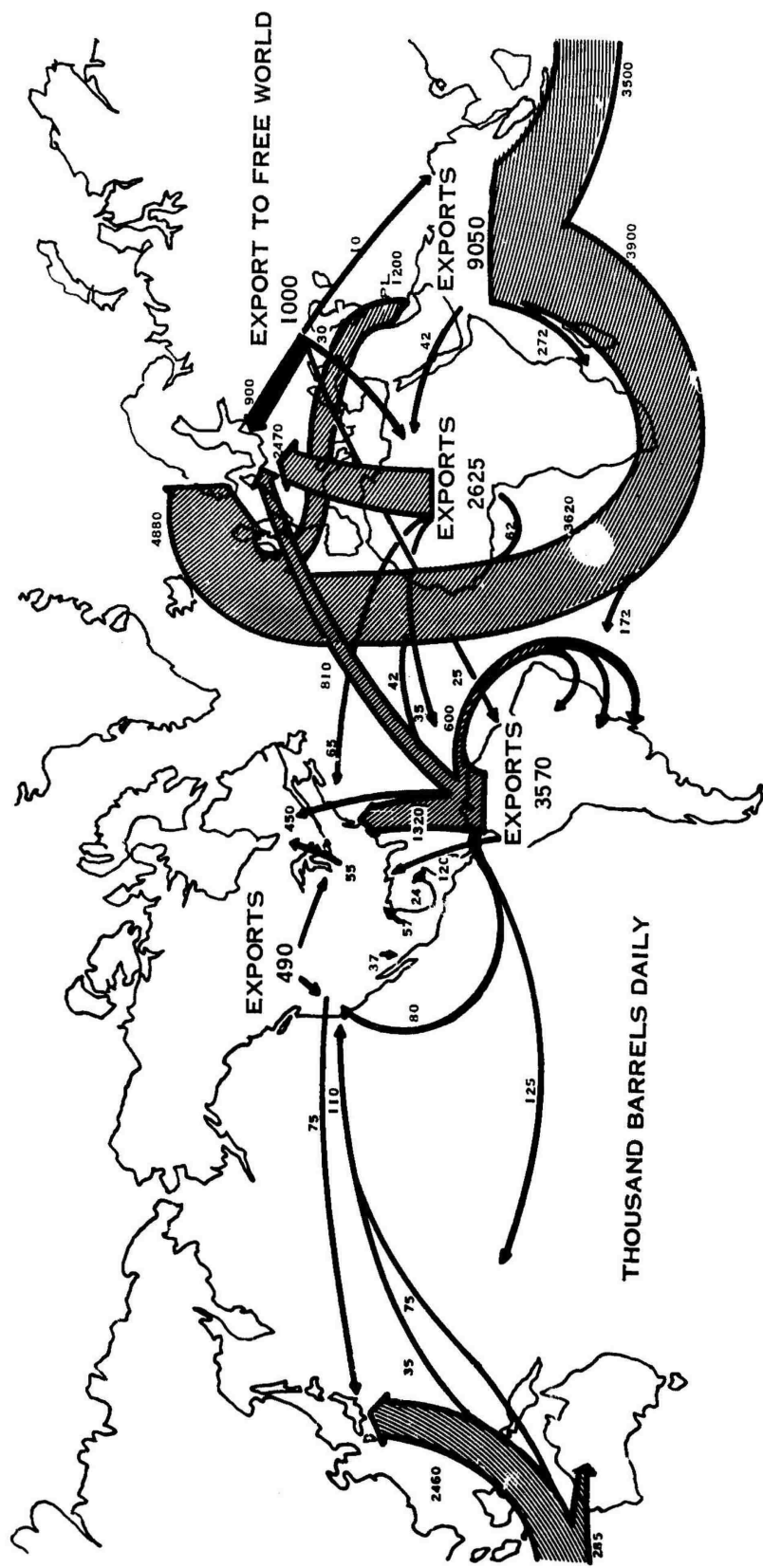


FIGURE 7. FREE WORLD INTERNATIONAL FLOW OF PETROLEUM AFTER ISRAELI-ARAB WAR, 1967
(PARTIAL ESTIMATE)

POL

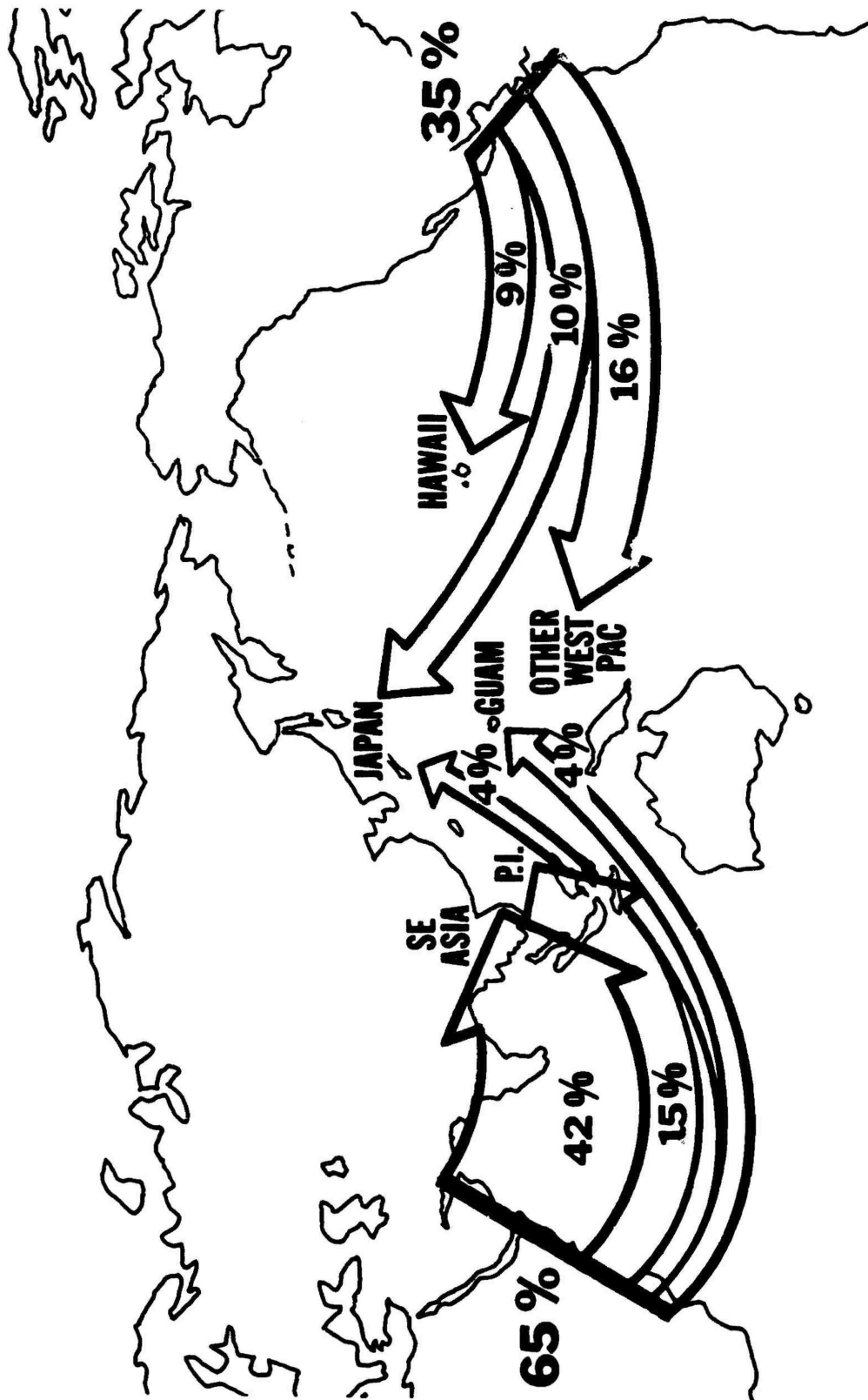


FIGURE 8. PACOM POL SUPPLY SOURCES AND DISTRIBUTION

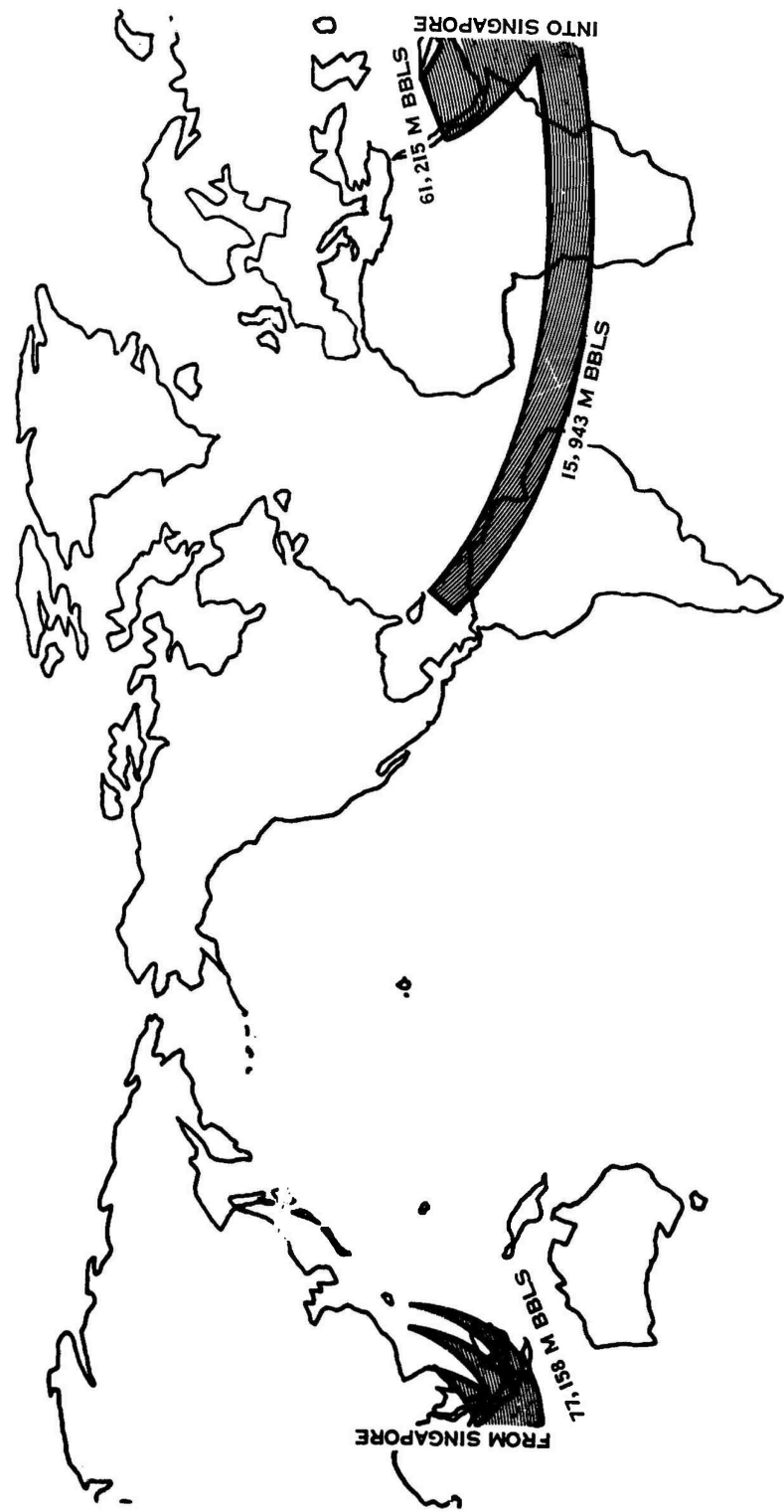


FIGURE 9. COMMERCIAL POL SUPPLY LINES TO VIETNAM, FISCAL YEARS 1967, 1968 AND 1969

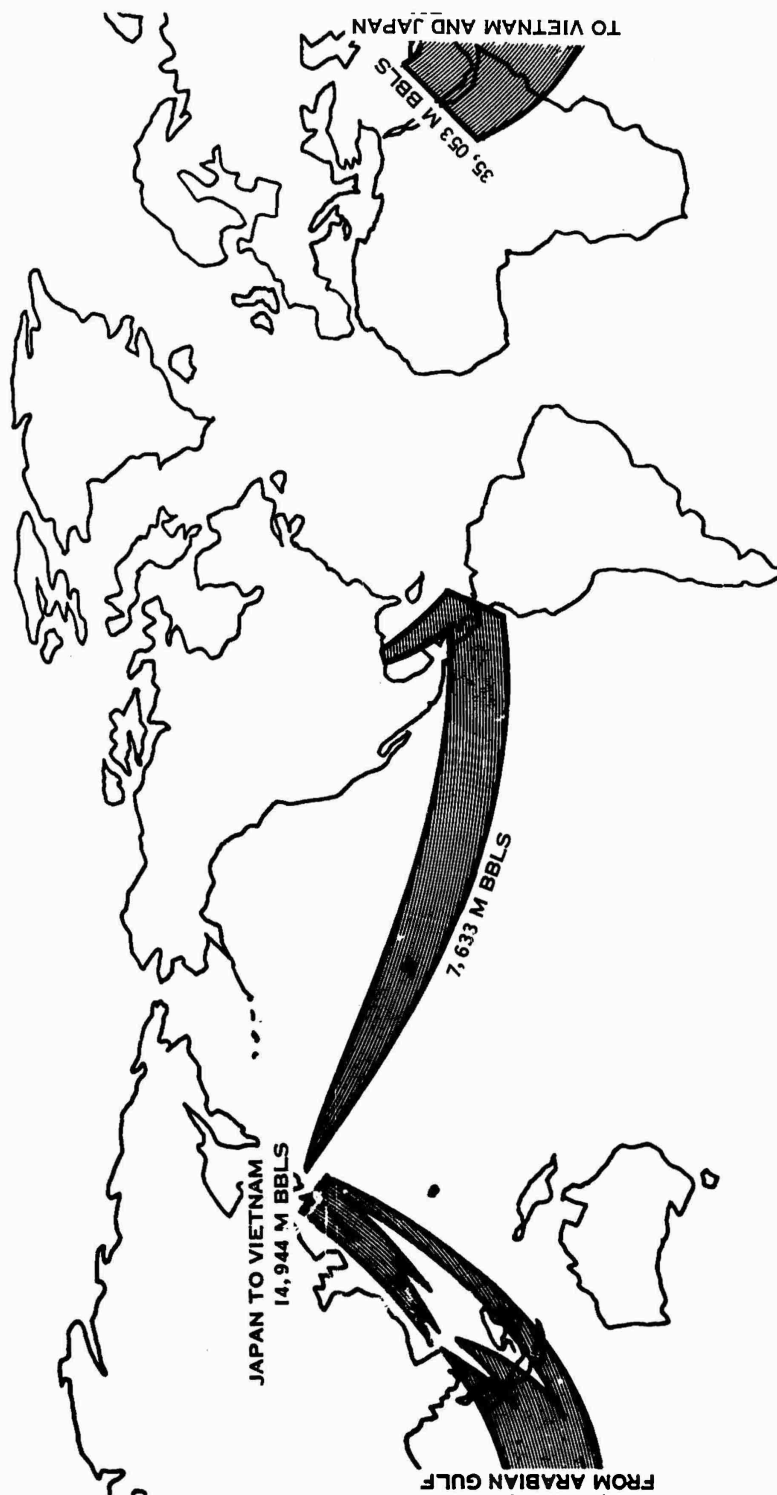


FIGURE 10. MSTs POL SUPPLY LINES TO VIETNAM, FISCAL YEARS 1967, 1968, AND 1969

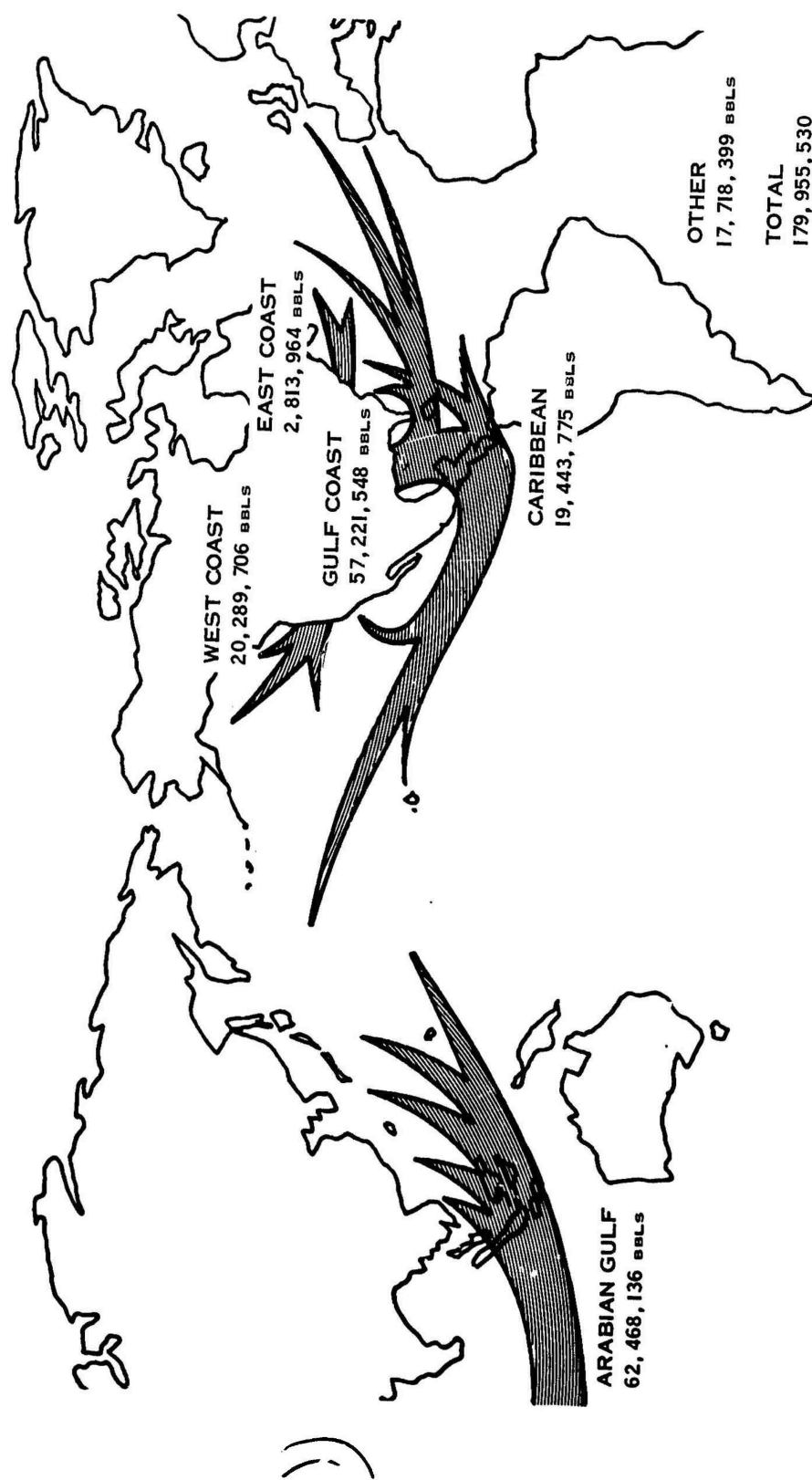


FIGURE 11. MILITARY TANKER LIFTINGS—FISCAL YEAR 1969

POL

(2) At the time of the force buildup, the total POL storage in-country, virtually all commercial, amounted to approximately 1.6 million barrels.² Approximately 80 percent of the storage was at the main terminals at Nha Be,³ 12 percent at Da Nang,⁴ and the remaining was at other locations throughout Vietnam.

(3) None of these facilities could receive a fully loaded T-2 tanker. Nha Be, situated on a river, some 36 miles from the coast, had a draft limitation of 26 to 27 feet. As a result, Nha Be had to be supplied in special shallow-draft tankers or by T-2 tankers loaded only to about 80 percent of capacity. In the Da Nang area, installations were located in Lien Chieu with a draft of 23 feet and Nahien with a draft of 14 feet. The draft at Lien Chieu gave it a capability of offloading vessels of T-1 size, whereas Nahien because of its shallower draft was able to handle only barges that shuttled POL from tankers anchored in Da Nang Bay. Hence, because of these depth limitations, Da Nang was more costly to resupply than Nha Be. Small terminals, such as Qui Nhon, on the coast and Can Tho, Vin Long, and Govap on inland waterways, were supplied by barge from Nha Be. Tan Son Nhut Airport and other users in the Saigon area received truck deliveries from Nhabe.

b. Early Support (Military)

(1) Initial military support was provided by assault equipment. In the Army, Navy, and Marine Corps, this equipment consisted primarily of 10,000-gallon-capacity collapsible tanks, 4-inch rubber hose, and 350-gallons-per-minute pumps. In addition, the Army and Navy buoyant and bottom-laid pipelines were used for ship-to-shore discharge of POL into assault equipment. These pipelines permitted refueling of a storage area on or near a seacoast by an offshore tanker through a sealine. This equipment was designed for the assault phase of an operation and would normally be replaced as the primary operation area moves inland. Of primary importance to Air Force operation were portable hydrant fueling systems of the R-1 type (four 50,000-gallon-capacity collapsible tanks capable of servicing two aircraft at the rate of 300 gallons per minute (each)). In January 1965, 25 of these systems were in Air Force inventories throughout the world—six in PACAF, seven in TAC, seven in USAFE, and five in MAC. As operations in Vietnam expanded, all 25 of these systems were committed in SE Asia. As the consumption of POL increased in Vietnam, the Army and Navy built semipermanent steel tankage for storage areas while the Air Force did the same for air bases.

(2) AOGs played an extremely important part in the resupply of in-country forces. These small tankers shuttled fuel from larger vessels that were unable to navigate close enough to such areas as Hue (Tan My), Chu Lai, and Qui Nhon to discharge their cargoes. The AOG USS GENESSEE pumped nearly 10 million gallons of product ashore in support of I Corps Tactical Zone (CTZ) from May to September 1965. By the end of the year the USS TOMBIGBEE had provided over 15 million gallons during a similar period.⁵

(3) In FY 65, the average number of ships in Seventh Fleet was 107. Ship consumption of NSFO was 10,850,000 barrels for the year, with approximately 70 percent of the quantity issued underway by fleet oilers. Ship consumption of NSFO increased approximately 50 percent through 1966.⁶ The total quantity of POL consumed exceeded the predicted consumption in the area for general war condition.⁷

²Headquarters, U. S. Military Assistance Command, Vietnam, Letter MACJ 44, subject: Petroleum Operations in the Republic of Vietnam (U), 2 December 1964 (SECRET).

³Commander in Chief, Pacific, Command History 1965 (U), Volume II, 13 May 1966 (TOP SECRET).

⁴Lt. Gen. W. O. Senter, USAF, Director, Petroleum Logistics Policy, Department of Defense, Presentation at joint meeting of PSSC, SEA Military Petroleum Situation, October 1965.

⁵Department of the Navy, Operations of Service Force, U. S. Pacific Fleet FY66 (U), September 1966 (CONFIDENTIAL).

⁶Department of the Navy, Operations of Service Force, U. S. Pacific Fleet FY67 (U), July 1967 (CONFIDENTIAL).

⁷Department of the Navy, OPNAVINST 004020.15, Peacetime Operating Stock Requirements and Prepositioned War Reserve Requirements for Principal Bulk Petroleum Products (U), 14 April 1969 (SECRET).

(4) In February 1965, the Commander in Chief, Pacific (CINCPAC), arranged for positioning of two small tankers at Subic, Philippine Islands, with assorted loads of POL primarily for backup of Nha Be and Da Nang.⁸ Seven days later, one of the tankers, the T-1 PETALUMA, was used to resupply Qui Nhon when commercial contractors were unable to deliver.⁹ From that time, floating storage has been in position in or near Vietnam as backup for storage ashore and, as in the case of Da Nang, as a backloading facility.¹⁰

(5) Offshore carriers and large combatants used for shore bombardment or patrol, as well as carrier-based aircraft could not be supported with POL from Vietnam. NSFO required for ship propulsion, and JP-5 required for ship-based aircraft were not available commercially in-country, nor were the military storage facilities adequate in capacity or flexibility to handle two additional products. Although the storage capability for JP-5 and NSFO at Navy Supply Depot (NSD), Subic was only about one-third the amount considered necessary under general war condition, it was closest to the area of operations.¹¹ In addition, the tankers resupplying Subic were increasing in size, thereby requiring greater amounts of ullage for discharge. Consequently, to receive one of the super-tankers of 440,000 barrels required an inventory reduction of 50 percent at Subic, reducing the available storage for operations and PWRS to less than 15 days. The larger tankers resupplying the WESTPAC had another deleterious effect—there were fewer numbers of tankers enroute at any one time resupplying the WESTPAC and, therefore fewer possibilities to divert a tanker from one area to another. At one time, Subic had so little NSFO that a fleet oiler had to rendezvous with a tanker at sea and then proceed to the carrier's operating area of Vietnam. The most significant aspect of Navy POL consumption in support of the Vietnam conflict was its immediate upsurge when the hostilities began and its continuation thereafter.

(6) The sudden and sustained increase in consumption of JP-5 and NSFO at Subic, as illustrated in Figures 12 and 13, portrays an added planning factor that must be considered in computing fleet requirements. This immediate and sustained increased usage of POL for the mobile fleet forces highlighted why adequate product must be stored in the area.

(7) Early in 1965, evidence clearly pointed to the eventual saturation of commercial capabilities in the area. Although industry was expanding moderately, the expansion would not be sufficient to meet the additional needs of the military.¹² Additional actions were therefore necessary to provide the required support capability.

c. Actions by the Military to Support the Increased Requirements

(1) Assignment of Responsibilities

(a) In April 1965, CINCPAC initiated action to assign in-country support responsibilities among the component commands.¹³

(b) In July 1965, CINCPAC, recognizing the limitations of commercial POL support and necessity for augmenting or replacing the commercial system, made specific assignments of responsibilities for in-country POL support to the component commands.¹⁴ In

⁸ Commander in Chief, Pacific, Message 221956Z, subject: Floating POL Storage (U), February 1965 (TOP SECRET).

⁹ Commander in Chief, Pacific, Command History 1965 (U), Volume II, 13 May 1966 (TOP SECRET).

¹⁰ Commander in Chief, Pacific, Command History 1968 (U), May 1969 (TOP SECRET).

¹¹ Department of the Navy, OPNAVINST 004020.15, Peacetime Operating Stock Requirements and Prepositioned War Reserve Requirements for Principal Bulk Petroleum Products (U), 14 April 1969 (SECRET).

¹² Commander in Chief, Pacific, Message 280149, subject: Commercial Contractor POL Support Vietnam, May 1965; Defense Supply Agency, Defense Fuel Supply Center, Request for Proposal 65-N-345, May 1965.

¹³ Commander in Chief, Pacific, Message 441945Z, subject: Operation of U.S. Military Ports, Beaches, and Depots from Chu Lai to DMZ (U), April 1965 (SECRET).

¹⁴ Commander in Chief, Pacific, Message 180039Z, subject: POL Support RVN, July 1965.

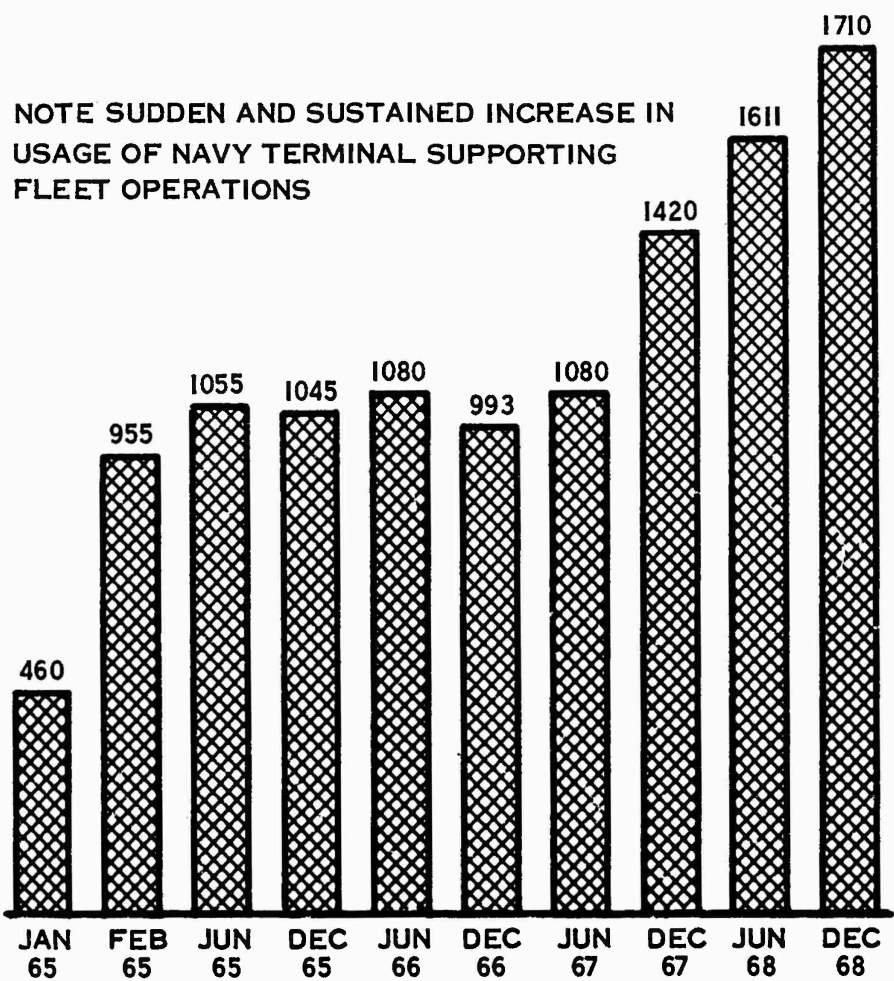


FIGURE 12. SUBIC BAY NAVY SPECIAL FUEL OIL CONSUMPTION
(THOUSANDS OF BARRELS)

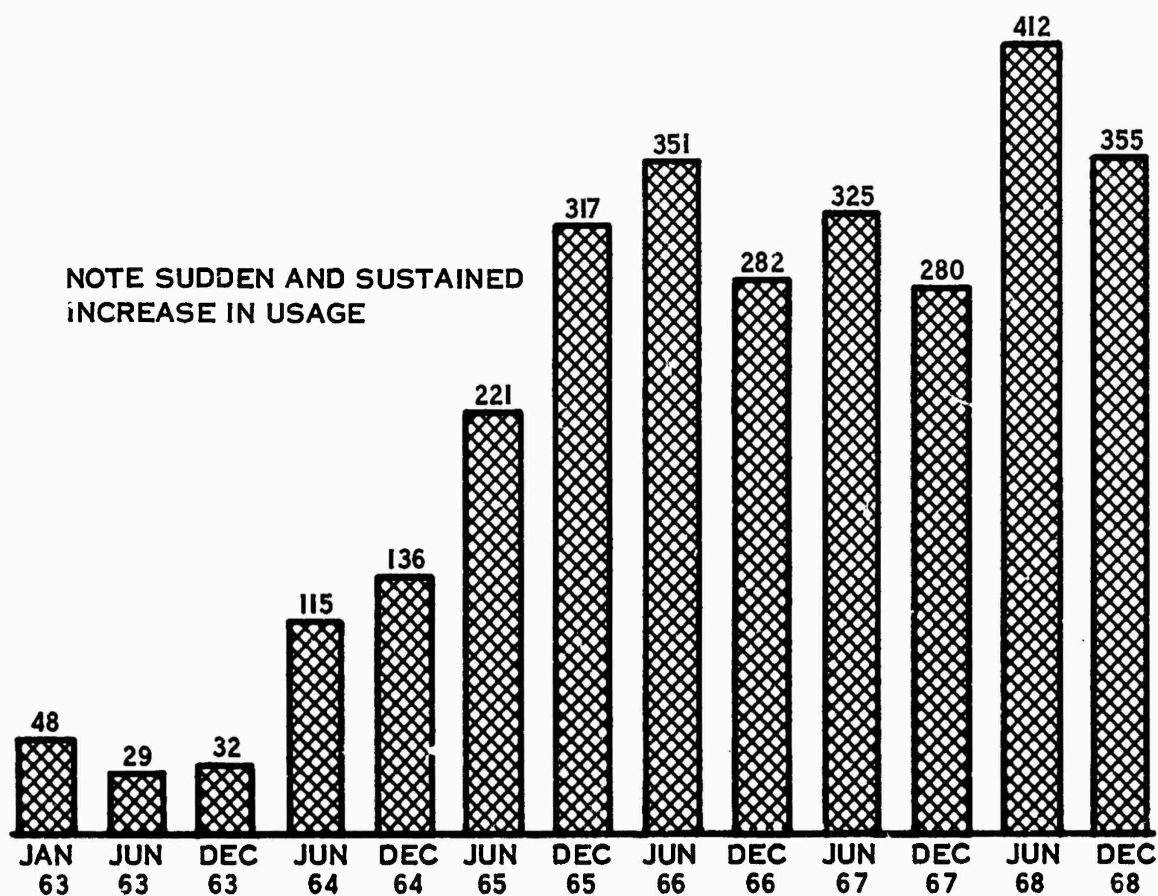


FIGURE 13. JP5 CONSUMPTION-NSD SUBIC IN SUPPORT OF CARRIER OPERATIONS, SOUTHEAST ASIA (THOUSANDS OF BARRELS)

this message, the Army was assigned POL support responsibility south of the Chu Lai area. This assignment covered the II, III, and IV CTZ areas. The Navy was assigned support responsibility from Chu Lai to the Demilitarized Zone (DMZ) (I CTZ area). The Air Force was assigned on-base support responsibilities at airfields primarily designated for Air Force use.

(2) State-of-Readiness of the Services in Relationship to Their Expanded Responsibilities for In-Country POL Support

(a) Product Availability. Owing primarily to the rate of buildup in the area of SE Asia and the capability of purchasing POL in sufficient quantities in the Arabian Gulf and Caribbean, PWRS did not play a big part in the increase in operations. On 1 January 1965, sufficient stocks were on hand in the Pacific but were positioned primarily in Hawaii, continental United States (CONUS) west coast, and Japan, and not in the high-use area of SE Asia chiefly because of storage limitations in these areas.

(b) Personnel

1. The Army and Navy both had POL schools but had very few billets where practical experience could be gained or maintained. The Army and Navy had to depend, to a large extent, on inexperienced personnel until they were able to train personnel in-country. At one time, Da Nang had one experienced and five first-time POL officers. The Air Force, performing essentially the same base-type POL support in-country as in CONUS, had an adequate number of experienced personnel to satisfy its needs.

2. The U. S. Navy was charged with petroleum procurement inspection in Vietnam as a result of an interdepartmental agreement in 1960. One civilian inspector was assigned in 1965 to inspect contractor facilities, ensure quality of product, and assist the user when requested. (Basic quantity and contamination checks rested with the end user on receipt.) As the buildup increased, unsuccessful attempts were made to recruit more civilian inspectors. An officer inspector was assigned and military inspectors were borrowed from other Services on an interim basis. Later, the Army assumed responsibility for procurement inspection in Vietnam. The Army solved the lack of POL inspectors problem by the assignment of military POL inspection personnel.

(c) Facilities and Distribution Systems. The Services did not have sufficient organic equipment or trained construction personnel to satisfy the heavy demand for constructing the needed port facilities, storage complexes, and distribution systems. Therefore, each to varying degrees had to rely on the military construction program, i. e., contractors, to provide these facilities and systems.

(3) Construction Policy and Programs. When the decision was made to provide a military petroleum support capability in Vietnam, construction of storage facilities was controlled to a great extent, the same as other Military Construction Program (MCP) projects, and was subject to established policy and guidance provided by Department of Defense (DOD), Joint Chiefs of Staff (JCS), the Services, CINCPAC, and Commander, U. S. Military Assistance Command, Vietnam (COMUSMACV).

(a) DOD Guidance. The Secretary of Defense issued a memorandum on 2 September 1964 to the Joint Chiefs of Staff stating that construction costs related to unit deployment to Vietnam were to be funded from appropriations available to the Services rather than from the Military Assistance Program (MAP).¹⁵

¹⁵Secretary of Defense, Memorandum, Subject: Funding of Costs of U. S. Force Buildup in Vietnam, 2 September 1964.

POL

(b) JCS Instructions. In implementing guidance provided by the Secretary of Defense, the Joint Chiefs of Staff on 3 September 1964 by message to CINCPAC, stated in part:

"It is desired that CINCPAC be the focal point for and coordinate all pertinent construction requirements and assign priorities by Service.

"Construction projects are to be submitted for all emergency requirements including those previously in MAP.

"Projects are to be identified as emergency Vietnam construction requirements and submitted concurrently to each Service. Object is to process all Service requirements through the Office of the Secretary of Defense simultaneously and to Congressional Committees as necessary.

"CINCPAC will submit project packages directly to the appropriate Service keeping the Joint Chiefs of Staff and other addressees informed."¹⁶

Thus, in response to the growing scope of operations, CINCPAC was placed in the position of overall coordination of requirements. Military construction program submission procedures remained unchanged; requests were processed through Service channels and justified to the Congress by the Services.

(c) CINCPAC Instructions. CINCPAC in turn by an operations plan delegated the assignment of construction priorities to COMUSMACV. As a result, COMUSMACV by an operations plan established the following priorities:

1. Improve airfields and related facilities at specified locations as necessary.
2. Improve main supply routes as necessary.
3. Improve railroads as required.
4. Rehabilitate and expand port facilities at specified locations as necessary and appropriate.
5. Improve logistic base and support facilities to include POL storage and dispensing facilities, as necessary.
6. In the event of any of the tasks listed in previous subparagraphs could not be accomplished because of enemy action or for any other reason, the succeeding task would assume the higher priority. For example, port improvement might supersede over railroads.

(d) Instructions of the Services. Since military construction program submission procedures were unchanged, the Service POL elements in each Deputy for Logistics at Headquarters staff level had coordinated and verified the POL requirements for storage in these areas of responsibility. The Army in II, III, and IV CTZ areas; the Navy in the I CTZ area; and each Service in the on-base storage at airfields primarily designated for their use. The policy each Service had established for POL storage capacity was as follows:

1. The Army POL storage policy for the area was issued by
CINCUSARPAC:

a. A 60-day, offshore stockage objective for bulk class III was authorized for all U.S. Army troops in the Republic of Vietnam and Thailand, and the common items of supply furnished other U.S. Services by the U.S. Army.

¹⁶Joint Chiefs of Staff, Message JCS 8314, subject: Construction Requirements in Vietnam, 032200Z, September 1964.

b. The stockage objective for the support of U.S. forces in Vietnam was 30 days for troops supported from the depot complexes. This 30-day objective was exclusive of prescribed loads, basic loads, and stockage at General Support Units/Direct Support Units (GSU/DSUs).

2. The Navy policy, for POL operating stock storage capacity assigned the Navy Fuel Supply Office the responsibility to compute the quantity. Each POL support complex was considered separately. The quantity of each resupply considered most economical for the normal method of resupply within the physical capabilities of the planned facility was the first consideration. In addition, product usage, distances to prime and alternate sources of supply, and available commercial facilities were considered in developing the optimum storage capacity needed for operating stocks.

3. The Air Force established a policy for POL storage capacity in SE Asia for an on-base storage capacity equal to 30 days of the anticipated average usage rate plus 30 additional days in the combined commercial and/or military storage complex(es) supporting the base.

(e) CINCPAC POL Tankage Policy. In a message to the component commanders, CINCPAC established a POL tankage requirement for SE Asia based on the maximum use of the existing commercial supply system.¹⁷ In this message it was stated that CINCPAC believed that a 30-day supply level in an area was adequate. In terms of facilities, tankage on base or within a designated supply area equivalent to 1.1 times 30 days (33 days) consumption was considered adequate. When resupply was by tanker and delivery could not be made directly to air base tankage, additional tankage was to be required to facilitate tanker discharge at port terminals. Such additional tankage would be the minimum necessary, considering the type of tankers to be employed and reasonable resupply scheduling. In the message, Cam Ranh Bay was declared an exception for an extra quantity for redistribution. To assist CINCPAC in evaluating the POL facility program, each component was requested to submit its 30-day bulk POL consumption by product for approved forces. No other exceptions to the CINCPAC policy were made for ports or base complexes in Vietnam.

(f) In October 1966, the Joint Chiefs of Staff pointed out to CINCPAC the need to construct more POL storage in Vietnam, stating that a storage capacity equal to 30 days usage plus 10 percent would provide an average of about 20 days supply on hand, and that to maintain any semblance of a 30-day level of stocks on hand about 50 days of storage capacity would be required.¹⁸

(g) The POL storage situation in Vietnam was the subject of several messages between the Joint Chiefs of Staff and CINCPAC from October 1966 to February 1967. Agreement was finally reached on a total construction goal of 4.4 million barrels of storage.¹⁹

(h) While the differences in POL storage policy between the Joint Chiefs of Staff and CINCPAC were being exchanged, the military construction program from the Military Assistance Command, Vietnam (MACV), never exceeded 3.3 million barrels.²⁰ Figure 14 depicts POL storage and consumption in Vietnam for FY 65 through FY 68.

(4) Improvements in Storage Capability. Storage, the same as redistribution improvements, was designed to augment or, if necessary, replace the existing commercial system.

¹⁷Commander in Chief, Pacific, Message 132356Z, subject: POL Tankage SEASIA (U), November 1965 (SECRET).

¹⁸Joint Chiefs of Staff, Memorandum JCSM659-66, subject: Review of Construction Program South RVN, 12 October 1966 (SECRET).

¹⁹Joint Chiefs of Staff, Message 7191, subject: POL Support RVN, 242217, February 1967 (SECRET).

²⁰Commander in Chief, Pacific, Message 112214Z, subject: POL Support RVN, March 1967.

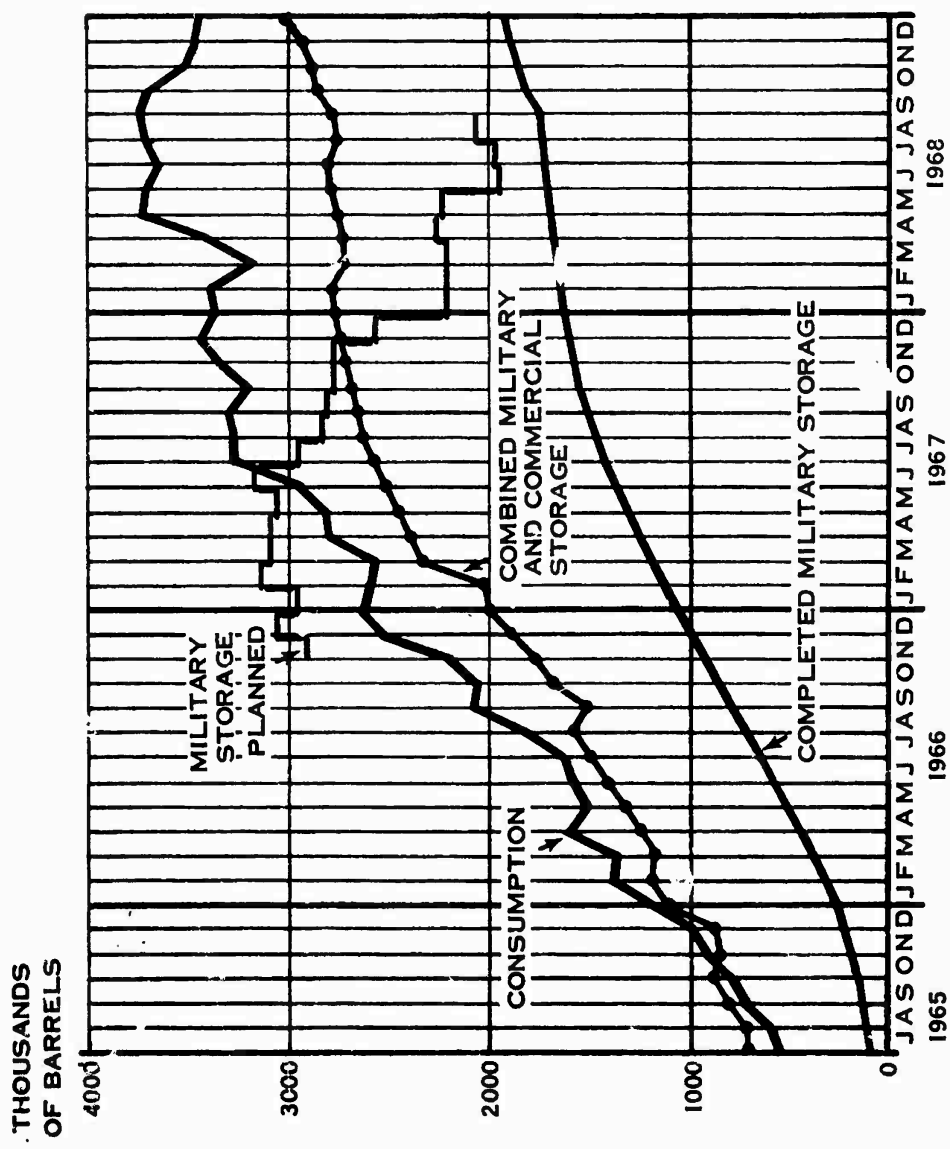


FIGURE 14. VIETNAM POL STORAGE AND CONSUMPTION

POL

(a) Initial storage was constructed to replace collapsible bladders at Da Nang, Chu Lai, Qui Nhon, An Khe, Tuy Hoa, Phan Rang, Nha Trang, Cam Ranh Bay, Vung Tau, Long Binh, and Can Tho. From late 1965 through 1966, military steel tankage and pipelines were being constructed at all areas named above as well as at Pleiku, Vong Ro Bay, Phan Thiet, and Soc Trang. The construction at Cam Ranh Bay was in line with plans to make that location a major military POL redistribution facility.

(b) The primary source of semipermanent tankage became the 10,000-barrel-capacity bolted steel tanks in the inventory of Navy Advanced Base Functional Component stocks. The Navy released 127 of these tanks to the Army and Air Force for use in Vietnam and Thailand. In Europe, the Army had approximately 1,400 miles of 6-inch victualic pipe with fittings and appurtenances, and approximately 750,000 barrels of unassembled bolted steel tankage (10,000-barrel capacity) stored for an emergency POL pipeline system as backup for the North Atlantic Treaty Organization (NATO). Two conditions precluded immediate redeployment: A team from the Office of Chief of Engineers (OCE) inspected the U.S. Army, Europe (USAREUR), stockpile and their reports indicated that maximum rehabilitation was required;²¹ and the Office of the Secretary of Defense froze this stockpile until the Secretary of Defense completed a review of policy with regard to NATO and the implications of the Fast Relocation European Line of Communication (FRELOC) and until a decision was made regarding the U.S. position. In Thailand, Strategic Logistical Activities Thailand (SLAT) stocks were pre-positioned consisting of 238 miles of 8-inch victualic pipe, fittings, and appurtenances along with 400,000 barrels of unassembled tankage. All stocks were earmarked for a pipeline from Siracha to Korat proposed for construction during the same time frame as the buildup in Vietnam. In Japan, stored for backup of the U.S. Eighth Army, Korea, under control of the Commander in Chief, U.S. Army, Pacific (CINCUSARPAC), were nominal incomplete amounts of pipe and fittings for operational projects of the Eighth Army during 1965 and 1966. Some few items were shipped to Vietnam, but, by and large, insufficient stocks were on hand to materially assist in the overall construction effort.

(c) The Commander in Chief, Pacific Fleet (CINCPACFLT), and Commander, Service Forces, Pacific (COMSERVPAC), recognized the lack of storage in the SE Asia area and gave the highest priority to remedial construction.²² To alleviate shortage at Subic, 1,150,000 barrels of storage capacity was constructed for Navy products and 240,000 barrels for JP-4 and Aviation Gasoline (AVGAS) for the Air Force between 1965 and 1969.²³ In September 1967, a monobuoy was installed at Subic and since that time has received an average of 909,658 barrels of product monthly.²⁴

(d) In 1965, the limited military permanent storage on Vietnam was actually owned by the Vietnamese Air Force and through local arrangements at Da Nang and Bien Hoa, it was operated by the U.S. Air Force in support of all forces at those bases.

(3) By July 1966, U.S. forces were operating at more than 50 locations throughout Vietnam. Only 20 of those locations had a bulk fuel storage capability. The other locations used packaged stocks because requirements were small or because of the lack of bulk fuel storage equipment.

(f) Shell Oil Company increased its petroleum complex at Da Nang with a mooring for T-5 tankers; 125,000 barrels of storage; and a pipeline interconnected with the military pipeline to the air base and Marble Mountain. After considerable negotiations and construction delays, this facility at Da Nang was ready for operation by 1 January 1967.²⁵

²¹Department of the Army, Chief of Engineers, Report of Visit to USAREUR, May 1965.

²²Commander in Chief, Pacific, Command History 1965 (U), Vol. II, 13 May 1966 (TOP SECRET).

²³Department of the Navy, U.S. Naval Supply Depot, Subic Bay, Philippines, Condition Paper. Code 70-0, 1 July 1969.

²⁴Ibid.

²⁵Shell Oil Company, Cong Ty Shell, Saigon, Vietnam, Report, In-Country Capability (U), 6th ed., October 1969 (COMPANY CONFIDENTIAL).

(g) In the I CTZ area, construction of tankage at Tan My was completed in 1967, and the Naval Support Activity assumed operation of the facility of 15 December 1967.²⁶

(h) The storage and redistribution program originally envisioned has not yet been attained.²⁷ For example, occupancy of the storage portion of the Cam Ranh Bay facility was commenced in 1968, but the facility never attained a redistribution capability. Redistribution at this facility can be made only by land and air as it does not have a tanker backloading capability.

(i) Since usage continued to escalate, POL storage capacity requirement continued to change and available storage capacity at most locations never reached the CINCPAC established levels. Da Nang, with 35 days storage, was the only major complex to equal or exceed the 33 days of storage desired by CINCPAC.²⁸ Monthly consumption of POL increased from 500,000 barrels per month in July 1965 to a high of more than 3 million barrels per month in 1968 while military storage rose to more than 2.6 million barrels (see Figure 10).

(j) In the absence of sufficient permanent POL storage, collapsible tanks, primarily 10,000, 20,000 and 50,000 gallon capacity, proved to be an effective and highly useful item of equipment. By October 1969 over \$27 million in collapsible bladders had been shipped to Vietnam.

(5) Buildup of a Redistribution Capability. Because of the lack of adequate storage at many operating locations, unusual demands were placed on equipment and facilities to effect frequent fuel deliveries. The redistribution pattern was primarily built around coastal storage sites. Fuel deliveries were made by coastal tankers, barges, bladder boats, trucks, rail, aircraft, and pipelines.

(a) At first, Nha Be was the only facility with a tanker backloading capability. However, by stationing a T-2 tanker in Da Nang Bay, Da Nang also gained a backloading capability. Redistribution to the other facilities (except Cam Ranh Bay) was made from these two facilities until harbors and discharge facilities at the other storage areas could be upgraded to receive T-2 or larger tankers. At this time, storage was replenished by redistribution from Nha Be, Da Nang, or directly from the Singapore area.

(b) Inland distribution from these storage sites was accomplished primarily by trucks with railroads, airplanes, and river craft augmenting when possible and/or necessary. Commercial, military, and contract barges and boats were used for river transport. LCMs and YFUs with 3,000- or 10,000-gallon collapsible bladders were used extensively in the I CTZ and Delta areas. Lighterage pontoons were tailored to meet the situation and ammi barges were used when barge quantities were required. Line hauls by 2,600-gallon commercial trucks and military 5,000-gallon tractor-trailer combinations were mainstay of petroleum movement in most areas. In the early days line hauling was often the only means of moving fuel inland; today it is the principal means by which fuel finally reaches the end-user. Movement by highways is often coordinated into convoy movement owing to the lack of secure highways. Although there have been many ambushes against these convoys, the long-line haul capability in Vietnam has not been substantially reduced. These ambushes have caused, however, significant elements of tactical security to be devoted to safeguarding the convoys. Railroads have also been used when possible but, since 1965, ceased to be a dependable means of transportation for POL.

(c) When land and sea POL supply lines were cut off by weather, enemy action, etc., air transport was used for replenishment. Army, Marine Corps, and Air Force

²⁶Department of the Navy, Operations of Service Force U.S. Pacific Fleet FY68 (U), September 1968 (CONFIDENTIAL).

²⁷Commander in Chief, Pacific, Message 132356, subject: POL Tankage SEASIA (U), November 1965 (SECRET).

²⁸Department of the Navy, Naval Support Activities, Da Nang. Briefing to JLRB POL Team, subject: POL Support Operations, 5 October 1969.

POL

aircraft (C-130, C-123, C7A, and various types of helicopters), all proved their usefulness and capabilities when they were needed.

(d) Game Warden operations, implemented in 1966, were carried out by the River Patrol Force (TF116) to interdict waterborne traffic on the inland waterways of Vietnam. Their primary area of operations was the Delta. Resupply of POL to the patrol boats (PBRs) involved in these operations in this area was difficult. For support of riverine operations, it was necessary to bring in support ships which included repair, berthing and messing barges (YRBMs), landing craft repair ships (ARLs), yard freight utility craft (YFUs), and tank landing ships (LSTs). It was necessary to use these types of resupply craft since normal fuel tankers could not be moved into the shallow waters where the PBTs operated.

(e) For safety reasons, Navy regulations required JP-5 in lieu of JP-4 for tank storage on ships. For a period of time this created a problem, since many of the riverine support ships had helicopter pads and large quantities of JP-5 were needed for support. Originally, the major source of JP-5 was the Seventh Fleet oilers. The LSTs would rendezvous with oilers off Vung Tau and then deliver the JP-5 to the riverine elements. Since JP-5 had been placed on the list of common support items, the Army, charged with common support for the area, assisted with its supply.

(f) As operations moved west in the Delta, the POL supply lines became longer, and more problems were encountered. At Ben Luc on the Van Co Dong and Tan An on the Vam Co Tay, low bridges do not permit normal tanker craft to navigate. Initially an attempt was made to marry Navy lighterage pontoon sections. Each section held 840 gallons, and by trial and error the ideal setup became 2- by 5-section refuelers with an 8,400-gallon capacity. For large-scale operations these refuelers were inadequate, and ammi barges, with a capacity of 70,000 gallons, were utilized. On the barrier reef west, the entire Plain of Reeds was flooded during the rainy season, and interdictions had to depend on the 2- by 5-section and later 3- by 6-section lighterage barges. Fuel could not be flown to this area, since there were no dry areas to spot storage bladders. Along the Gulf of Thailand, an attempt was made to utilize civilian trucking firms; when this failed it became necessary to resupply these areas from sea using YFU craft with 3,000- and 10,000-gallon bladders installed.²⁹

(g) In FY 68, to provide the over 21 million barrels of fuel to the Seventh Fleet, ten oilers (nine oilers and one fast replenishment ship) were deployed in WESTPAC at all times. Each carrier task group required NSFO and JP-5, as well as bottled gas and lubricants, from an oiler every third day. In January 1968, a new all-time high record was set when 2,190,000 barrels of POL were issued to fleet units in WESTPAC. This was the highest quantity transferred in any month since World War II.³⁰ It should be noted that oilers on hand in the Navy worldwide inventory to accomplish these functions were 39 in number, with 32 of these from 20 to 26 years of age and the other 7 from 10 to 12 years of age. One AOE was commissioned in 1963.³¹ As a matter of fact, of 119 ships in the Service Force Pacific, only eight were 20 years or less of age.³²

(h) Pipeline movement of POL was more efficient and economical than highway transport when the area was secure enough for its use. A military construction program was undertaken, and by 1969 pipelines totaling about 270 miles were in use throughout Vietnam. Figure 15 depicts the POL pipelines in Vietnam.

²⁹ Department of the Navy, Naval Support Activities, Saigon, Briefing to the JLRB POL Team, subject: POL Problems Encountered While Conducting Riverine Operations Throughout II, III and IV Corps, 3 October 1969.

³⁰ Department of the Navy, Operations of Service Force U.S. Pacific Fleet FY 68 (U), September 1968 (CONFIDENTIAL).

³¹ Department of the Navy, Navy Support Plan (U), 1 July 1965 (SECRET).

³² Rear Adm. Edwin B. Hooper, USN, Address to Naval War College, subject: Logistic Support of Naval Operations in Western Pacific, 30 March 1967.

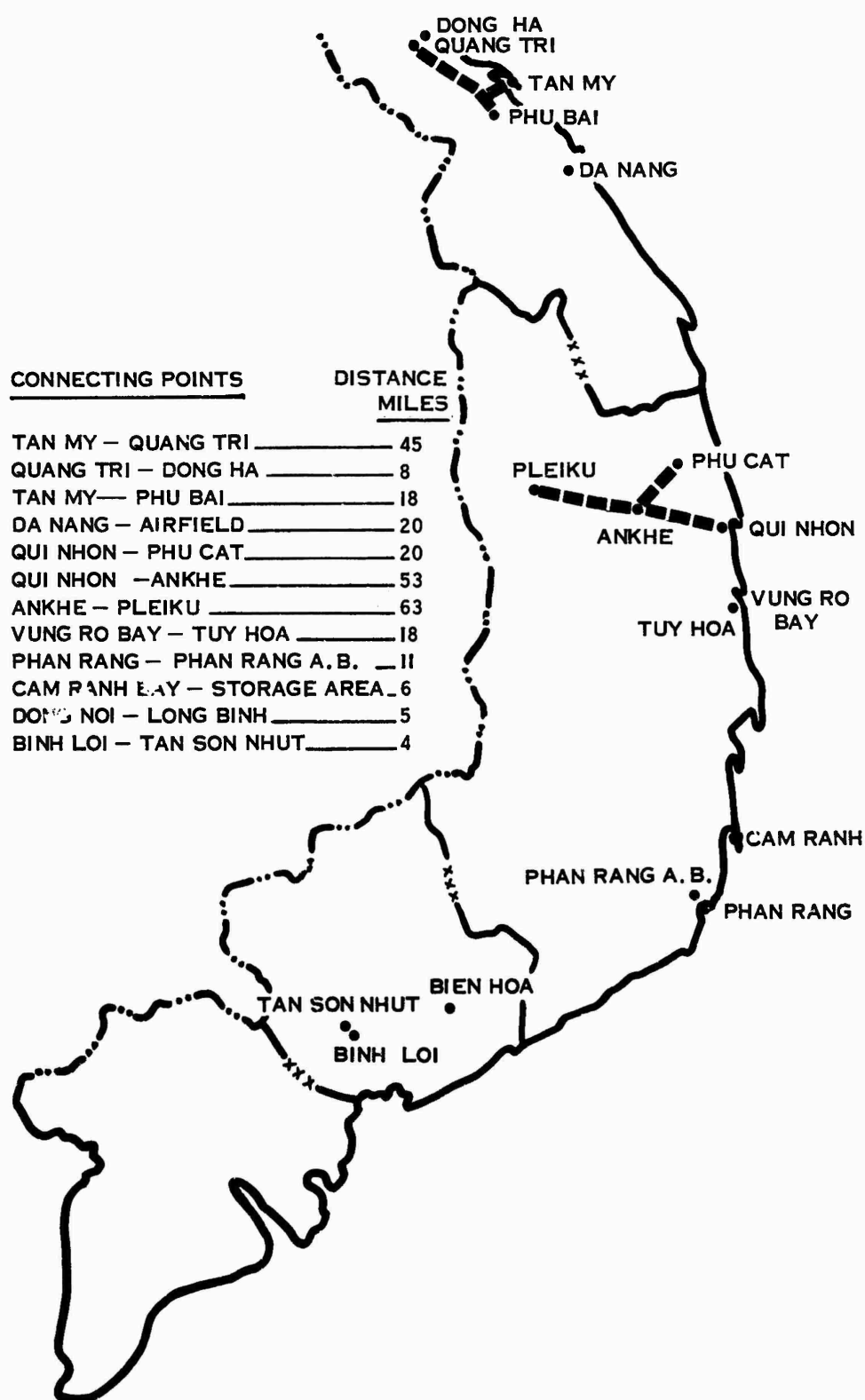


FIGURE 15. POL PIPELINES IN VIETNAM

4. PACKAGED POL PRODUCTS

a. General

(1) Packaged POL products included lubricating oils, greases, and specialty products in container sizes of 55 gallons and under. These products were considered nonvolatile items, and were stored and transported as most types of dry packaged cargo.

(2) In 1961, supply management of common packaged items was transferred from the Military Departments to the Defense Fuel Supply Center (DFSC), and later, in March 1965, to the Defense General Supply Center (DGSC). Procurement, however, remained the responsibility of the DFSC. The annual procurement of packaged POL products increased from \$33 million in 1965 to \$65 million in 1969 or 4.9 percent of the total POL procurement.

(3) The DGSC, in its management role, was responsible for storage and distribution to CONUS activities and to ports of embarkation for shipment to overseas commands.

b. Packaged Support in Vietnam

(1) Until 1965, requirements for packaged products in Vietnam were small, and many were readily available from local commercial sources. Those products not available locally were requisitioned through Headquarters, Support Activity, Saigon, for supply from Navy Supply Center (NSC), Oakland.

(2) In anticipation of the increase in consumption requirements for the buildup of forces in Vietnam, the Army Materiel Command's Operations Plan—Southeast Asia was implemented on 19 June 1965. Thus, the first-push shipments of packaged POL was made to SE Asia. Army-owned pre-positioned war reserve assets were used to fill push shipments. Push shipments ended on 24 February 1966, and subsequent supply was from the in-country commercial suppliers on a call-forward basis and by the Military Standard Requisitioning and Issue Procedure (MILSTRIP).

(3) According to Operations Plan—Southeast Asia, all forces in Vietnam were to requisition through the 2d Logistical Command on Okinawa. In II, III and IV CTZ areas, Naval activities were to requisition through the 1st Logistical Command on a "fill or kill" basis and re-requisitioning killed requisitions from NSC, Oakland. To ensure an orderly, yet adequate resupply from both the in-country supplier and MILSTRIP, certain items were selected to be furnished by each in I, III and IV CTZ areas. II CTZ was to be supplied all items by MILSTRIP. This arrangement was made to provide a source of supply close at hand in the event of a breakdown in the long pipeline from CONUS, and for the economies of packaged POL provided by the in-country supplier. However, practice did not always follow the plan, and there were problems.

(4) Packaged POL from CONUS was not always unloaded at the designated port in Vietnam, which caused either a local shortage or an overage. Packaged POL was called forward from the in-country supplier by operating forces sometimes without regard to whether the item was already on MILSTRIP requisition, and conversely, the operating forces would sometimes requisition items that should have been called forward from the in-country supplier. The effect was to duplicate requirements forecasting, creating occasional excesses in Vietnam and false demand data on which to base future contracts. Contractors consistently complained of large underlifts.

(5) On 1 March 1968, the I CTZ source of packaged products, other than contract furnished, became NSC, Oakland, instead of 2d Logistical Command. In addition, at DGSC an edit block was put in the computer for the items contract-furnished in Vietnam, and every requisition from that area was checked prior to shipment. In July 1969, the responsibility for inventory management for all packaged products in II, III and IV CTZ areas was assigned to the Director of Petroleum, Headquarters, 1st Logistical Command. The 1st Logistical Command

implemented a manual system of management to be used until such time as records of demands and inventories could be corrected to the extent that they may be usable in machine processing.

(6) Conclusions and recommendations concerning the implementation of supply support of these items in a joint operations area are found in the Common Support Monograph.

5. PROBLEMS ASSOCIATED WITH IN-COUNTRY SUPPLY AND DISTRIBUTION

a. Problems were encountered at all levels in accounting for bulk petroleum products shipped to SE Asia. These problems were generated as a result of the locally unstable conditions in SE Asia, inadequate facilities, and the requirement for detailed reimbursement financial accounting. Details of these problems and recommendations for their correction are outlined in Chapter V of this monograph.

b. Losses of product were experienced because of enemy action and pilferage by local national personnel. See Chapter V of this monograph for details.

6. SUMMARY

a. Readiness

(1) The required quantities of Pre-positioned War Reserve Stocks of POL were in being. Some were not ideally located because of storage limitations. Pre-positioned War Reserve Stocks for the Western Pacific and Southeast Asia were not located in the area of anticipated usage. In Europe, until additional storage could be built or leased, the status of Pre-positioned War Reserve Stocks was reduced well below requirements because of the necessary relocation from France.

(2) Replenishment supplies were readily available from primary and secondary refinery sources except for a short period following the Arab-Israeli War when shipments from the primary source were curtailed.

(3) Following the Arab-Israeli War, tankers were in short supply. However, at other times adequate numbers of tankers were available.

(4) The amount of other equipment on hand was initially reported satisfactory; much of it was old World War II vintage. Although there were some bladder-collapsible rubber tanks and portable fuel systems in the inventory, the continued increase in the level of operations without a parallel increase in petroleum facilities and dispensing systems created a shortage of this type of equipment until about mid-1968. Overall POL readiness of the military was considered satisfactory.

(5) Except for a scarcity of personnel fully trained in POL staff management, operations, procurement inspection, and contract administration, readiness of personnel and organizations was satisfactory.

b. Vietnam Support

(1) Prior to 1965, requirements were small and, although there were no refineries in Vietnam, three international oil companies (Shell, Esso, Caltex) did have adequate storage and delivery capabilities initially.

(2) These capabilities were sufficient until early 1965 when evidence clearly pointed to the eventual saturation of commercial resources in the area. It also became clear that, although industry was expanding moderately, the predominant share of the expansion needed to meet increasing demands would have to be accomplished by the military. Accordingly, CINCPAC assigned responsibilities for POL support and outlined a desired storage plan to supplement and/or replace commercial supplies. As it gradually evolved, the POL supply and

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distribution system in Vietnam became a military-supplemented commercial system in areas where commercial support had existed and a military system in other areas of the country.

(3) In answer to queries by the Chairman of the Joint Logistics Review Board concerning logistics problem areas in the Vietnam era, no problem areas in POL were cited by operational and logistics commanders. This absence of problem areas was primarily because POL was available to operating forces as required and, therefore, commanders of operating forces were not aware of any POL problems. However, when considering the administration of POL support to forces operating in Vietnam, problem areas did exist.

(4) Most of the problems were directly related to a lack of adequate U.S.-owned or -controlled, bulk fuel storage capability for support of operations in Southeast Asia. Lacking adequate storage forces heavy reliance on a commercial-military system. Problems resulting from a dual, limited capacity system are treated in detail in succeeding chapters of this monograph. Briefly, these problems were in areas of port facilities, transportation and distribution equipment, procurement inspection, accounting, contract administration, and dealing with ingenious methods of pilferage.

CHAPTER IV
ROLE OF CONTRACTOR IN POL SUPPORT IN VIETNAM

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ROLE OF CONTRACTOR IN POL SUPPORT IN VIETNAM

1. INTRODUCTION

a. This chapter explains the supporting role played by the three oil companies which had in-country distribution systems in being in Vietnam on 1 January 1965. It gives background information about them, their resources and facilities, and their relative participation in commercial petroleum, oil and lubricants (POL) support.

b. It shows that in July 1965, while emphasizing continued commercial support, the Commander in Chief, Pacific (CINCPAC), also recognized that commercial facilities were limited and that a military POL supply system capable of augmenting the commercial system or replacing it in whole or in part to support military requirements was required. It also notes CINCPAC's November 1965 restatement of policy emphasizing maximum use of commercial systems and providing that commercial systems be only supplemented as necessary to meet military needs. It discusses the relationship of these policies to integrated facilities' planning and resupply flexibility.

c. It compares the amount of commercial support used against the amount of military support used and gives the advantages and disadvantages of each. Moreover, it compares the merits of the commercial-military system that was actually used against the merits of a pre-dominantly military system.

d. It points out that POL regulations, procedures, responsibility assignments, and channels of communication had been developed in anticipation of using primarily a military supply system in wartime as well as in peacetime and that difficulties arose in the areas of contract administration, cargo management, accounting, and pilferage because of large-scale use of contractors and subcontractors. For this reason, it treats, at some length, the unusual contract provisions that were developed to cope with the difficulties that were encountered.

e. Further, in this chapter, a comparison of the costs under the dual commercial-military system, operating with inadequate facilities, with those of a military controlled system, operating with adequate facilities, is made to identify avoidable costs.

f. Finally, this chapter presents the conclusions and recommendations reached as a result of the review and evaluations.

g. This chapter limits its review to the main fuels (JP-4, Jet Fuel, 115/145 Aviation Gasoline, Motor Gasoline, and Diesel Fuel) and Asphalt. Fuel Oil and Liquid Petroleum Gas were used in minor quantities and caused no significant problems. Lubricating Oils and Greases are discussed separately in this monograph.

2. CONTRACTOR SUPPORT

a. Policy. This review has been unable to determine the specific considerations that led to the extent to which contractors were used in Vietnam for the storage and delivery of bulk petroleum. Policies in this regard were undoubtedly influenced by the existing capabilities and contractor support system in use, the graduated nature of the buildup, construction priorities, assumptions concerning the early end of the war, and the Secretary of Defense's budgetary guidance. With the deployment of U.S. combatant units to Vietnam in 1965, it was found

necessary to establish a military POL supply system. The message by which CINCPAC set forth the basic responsibilities for this system indicates that consideration was being given, in the summer of 1965, to the establishment of a wholly military system.¹ However, such a decision was never made, and POL support continued to be provided by a combination of military and contractor systems.

b. Contractor Support in 1965

(1) At the beginning of 1965, three international oil companies, Esso, Shell (Asiatic Petroleum), and Caltex were virtually the entire POL logistics system in Vietnam and Thailand for both civilian and military users. In this chapter, these companies will be collectively referred to as in-country contractors.

(2) The in-country contractor method of providing POL support had evolved because the U.S. military forces were in an advisory role in both countries. Total POL requirements were small, and could be met through use of the existing commercial facilities. Prior to 1965, the small U.S. military requirements in Southeast Asia were delivered in retail quantities, often in 55-gallon drums, to various locations in the field. They were even delivered to those locations that required the contractor to pass through hostile territory. Until 1965, requirements had risen gradually from year to year. Through 1964 only a moderate expansion of commercial facilities was necessary to handle the slight increase in military requirements. During 1965, however, the U.S. military requirements rose abruptly. With the increased consumption, it became necessary to decide on a course of action concerning POL facilities; i.e., continue commercial support through buildup of the commercial distribution system, construct military storage, or use a combination of these.

c. Continued Use of Contractors

(1) Early in 1965, the POL policy for Vietnam had called for continuation of maximum reliance on commercial POL support.² CINCPAC hoped that under this policy the industry would construct additional POL facilities where needed in Vietnam for military purposes. To this end, the Defense Fuel Supply Center (DFSC) issued on 17 May 1965, a request for proposals that required POL to be supplied at rates requiring in-country contractors to build storage.³ However, replies were not responsive to the RFP for two reasons: One, commercial storage already in being was far more than adequate for any foreseeable civilian demand after the end of hostilities and, two, the economic and physical hazards and limitations involved in expansion were strong deterrents. In view of these unattractive features, industry was reluctant to invest significantly more in POL facilities.

(a) By July, CINCPAC in a message commented, "Recognizing the commercial limitation, it has become necessary to provide for a military POL system which is capable of augmenting the commercial system or replacing it in whole or in part insofar as U.S., RVN and 3rd country military requirements are concerned."⁴ In the same message, CINCPAC assigned responsibilities to the Army to "provide and operate an in-country POL terminal and distribution system to augment or replace commercial systems, where and when necessary... south of the Chu Lai area."⁵ A similar assignment was made to the Navy for the area from Chu Lai to the Demilitarized Zone (DMZ).

¹Commander in Chief, Pacific, Message 180039Z, subject: POL Support RVN (U), July 1965 (SECRET).

²Commander in Chief, Pacific, Message 280149Z, subject: Commercial Contractor POL Support Vietnam (U), March 1965 (CONFIDENTIAL).

³Department of Defense, Defense Fuel Supply Center, Request for Proposals, RFP65-N-345, Petroleum Products for Vietnam, 17 May 1965.

⁴Commander in Chief, Pacific, Message 180039Z, subject: POL Support RVN (U), July 1965 (SECRET).

⁵Ibid.

(b) In November 1965, CINCPAC restated the policy placing greater emphasis on commercial support. CINCPAC stated, "The supply of bulk POL to and within RVN and Thailand is based on maximum use of existing commercial supply systems" and "Refs A and B assign responsibilities for supplementing repeat supplementing the commercial supply system" and, further, "The purpose of this message is to state CINCPAC policy relative to the provisions of facilities required to carry out the responsibilities assigned."⁶ Thus, the policy was altered to rely more heavily on commercial support and to preclude any replacement of the commercial system.

(c) Furthermore, construction of military POL facilities was not given a priority high enough to bring into being the facilities necessary for efficient, economical operation. Construction was held to the level that was considered the bare minimum required to effect supply. Supply of POL through the limited commercial-military distribution system ashore was uneconomical, but nevertheless provided effective and responsive support from an operational standpoint.

(2) To overcome the lack of storage ashore, it was necessary to resort to the expensive expedient of using tankers as floating storage to supplement the onshore storage that was available. In addition, tankers making deliveries to shore storage and to floating storage often incurred substantial amounts of demurrage and made extensive backhauls in the Vietnam area and from Japan.⁷ Both floating storage tankers and tankers delivering POL to Vietnam were provided in the initial stages of the buildup largely by the in-country suppliers. Later these were supplemented by Military Sea Transport Service (MSTS) tankers.

(3) Commercially supplied POL was scheduled into Vietnam in conjunction with POL for the civilian market. Mixed cargoes were scheduled into Vietnam by the in-country suppliers as they saw fit to meet their shares of the military and civilian markets. Moreover, the in-country contractors determined the level of inventory to be maintained in their storage and in the resupply channel. Such cargoes did not enter the regular slating and reporting system, they were not managed by Defense Fuel Supply Center and MSTS, and they were shipped exclusively in foreign-flag tankers.⁸ Foreign-flag shipping was permitted because for each contract period a determination had been made by MSTS that U.S. -flag vessels of appropriate size were not available.

(4) Military cargoes transported to Vietnam by MSTS were scheduled through normal slating channels, were entered in the military reporting system, and were intensely managed at all levels in the supply chain. MSTS tankers supplied to Vietnam were, as a matter of policy, U.S. -flag ships, although foreign-flag charters were required on other routes.

3. SUPPLY LINES TO VIETNAM

a. POL Supplied to Vietnam

(1) Sources

(a) Refineries, mainly in the Arabian Gulf and to a lesser degree in Singapore (which largely depended on Arabian Gulf crude oil), were Vietnam's principal sources of POL for all products with one exception; Aviation Gasoline came primarily from the Caribbean and U.S. Gulf. The Arabian Gulf Refineries were able, prior to 1965, to supply the entire WESTPAC military requirement of JP-4 Jet Fuel, Motor Gasoline, and Diesel Fuel. As

⁶Commander in Chief, Pacific, Message 132356Z, subject: POL Tankage SEASIA (U), November 1965 (SECRET).

⁷Comptroller General of the United States, Report to the Congress, B-165683: Overall Observations of Transportation and Traffic Management Activities in the Far East and Southeast Asia, 30 April 1969.

⁸Defense Supply Agency, Manual 4220.1, Operating Procedures for Bulk Petroleum and Coal Products, December 1969.

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requirements in the WESTPAC area grew, it became necessary to ship large supplemental quantities of JP-4 Jet Fuel from the Caribbean and the U.S. Gulf and minor quantities from Northern Europe. Thus, the WESTPAC area had to rely on substantial volumes of Aviation Gasoline and JP-4 Jet Fuel being scheduled and shipped from the Western Hemisphere. (See Figures 4, 5, and 6 of Chapter III of this monograph.)

(b) Vietnam, supplied in 1965 entirely by in-country contractors and later supplied by MSTs as well, with minor exceptions, received its POL during FY 67, FY 68, and FY 69 from sources as shown in Tables 1 and 2.

TABLE 1

SOURCES OF POL FOR VIETNAM SUPPLIED BY IN-COUNTRY CONTRACTORS

(Thousands of Barrels)

<u>Period</u>	<u>Arabian Gulf</u>	<u>Percent</u>	<u>Caribbean</u>	<u>Percent</u>	<u>Total</u>
Jul-Dec 66	7,437	66	3,886	34	11,323
Jan-Jun 67	6,977	58	5,152	42	12,129
Jul-Dec 67	9,565	91	930	9	10,495
Jan-Jun 68	11,650	88	1,520	12	13,170
Jul-Dec 68	11,640	90	1,256	10	12,896
Jan-Jun 69	<u>13,946</u>	<u>81</u>	<u>3,199</u>	<u>19</u>	<u>17,145</u>
Total	61,215	79	15,943	21	77,158

TABLE 2

ACTUAL MSTs TANKER LIFTINGS FOR VIETNAM

(Thousands of Barrels)

<u>Source</u>									
<u>Arabian Gulf</u>					<u>U.S. & Caribbean</u>				
<u>FY</u>	<u>Direct</u>	<u>Via Japan</u>	<u>Total</u>	<u>Percent</u>	<u>Direct</u>	<u>Via Japan</u>	<u>Total</u>	<u>Percent</u>	<u>Grand Total</u>
1967	4,598	2,229	6,827	94	123	300	423	6	7,250
1968	8,968	3,782	12,750	72		5,078	5,078	28	17,828
1969	<u>13,954</u>	<u>1,522</u>	<u>15,476</u>	<u>88</u>	<u>99</u>	<u>2,033</u>	<u>2,132</u>	<u>12</u>	<u>17,608</u>
Total	27,520	7,533	35,053	82	222	7,411	7,633	18	42,686

(2) Transshipping Facilities Outside Vietnam

(a) Petroleum supply lines to Vietnam were interrelated with those to Thailand and other areas of WESTPAC in that there was a large and concurrent increase in military requirements in all three areas, and they all received their POL from the same sources. In addition, both Vietnam and Thailand depended on the same transshipping facilities of the in-country contractors. Moreover, military facilities which were used to support WESTPAC were also used to transship military cargoes to Vietnam.

1. Commercial

a. Two principal POL ports were Saigon (Nha Be) Vietnam and Bangkok (Chong Nonsri) Thailand. They were used to distribute POL to civilian and military users. Both were contractor controlled. Both relied heavily on use of contractor-controlled transshipping facilities in the pivotal Singapore area. Singapore was used as a transshipping point because even the relatively small World War II-size tankers of the T-2 class could not gain access to Saigon and Bangkok fully loaded. The water depth on the approaches to these installations was not sufficient to accommodate them. Thus, it was uneconomical and inefficient to supply these ports in smaller vessels or partially loaded T-2 size vessels directly from the distant Arabian Gulf (4,000 miles) and Caribbean (11,000 miles) on which SE Asia largely depends for its petroleum. Instead, to gain some measure of economy, the oil companies shipped petroleum products in large (T-5 or larger), fully loaded vessels from the distant sources to the Singapore area, there to be unloaded into commercial facilities for reconstituting balanced multiproduct cargoes in small or partially loaded T-2 tankers for shipment to Saigon and Bangkok. This arrangement was also dictated by the contractors' inability to properly schedule balanced cargoes directly into Saigon and Bangkok because of the limited POL storage at these two ports. Singapore was also used to transship commercial cargoes to the other Vietnam ports of Cam Ranh Bay, Nha Trang, Qui Nhon, Chu Lai, and Da Nang, owing to the lack of sufficient storage at these locations. Furthermore, use of Singapore continued to be necessary to supply these ports even after they received the capability to moor T-2 size or larger tankers, because only limited storage was available.

b. MSTs cargoes were not accepted into commercial facilities at Saigon and Bangkok.

2. Military. The combined Government-commercial storage facilities north of Nhabé were not sufficient to permit MSTs vessels to regularly resupply them directly from the Arabian Gulf and Caribbean refineries. So, to enable MSTs to supply such locations with properly balanced cargoes, military facilities in Japan were used to transship military cargoes. CINCPAC requested and received three MSTs T-2 and T-5 tankers for shuttling products from storage in Japan which, in turn, was replenished by large MSTs tankers from the U.S. Gulf, Caribbean, and Arabian Gulf. Thus, a substantial amount of POL, particularly Motor Gasoline and Diesel Fuel, which had originated in the Arabian Gulf, was shipped to Japan and then backhauled in the smaller T-2 or T-5 tankers to Vietnam. This circuitous routing resulted in a movement some 5,000 miles in excess of direct routing. The costs for using MSTs vessels in transshipping from Japan were estimated to be in excess of \$6,500,000 annually.⁹

⁹Comptroller General of the United States, Report to the Congress, B-165083, subject: Overall Observations of Transportation and Traffic Management Activities in the Far East and Southeast Asia, 30 April 1960.

(3) Transshipping Facilities in Vietnam

(a) In July 1965 CINCPAC assigned a redistribution mission to the programmed Cam Ranh Bay facility and later authorized some 500,000 barrels of storage for that purpose.¹⁰ Notwithstanding this mission, the backloading capability was not developed at Cam Ranh Bay nor were adequate receiving facilities constructed elsewhere, presumably because of low construction priorities. Consequently, to supply Vietnam ports, it was necessary to continue to transship commercially supplied products via Singapore and to transship MSTIS supplied products via Japan.

(b) Moreover, it continued to be necessary to ship commercial vessels, destined for Nhabe, loaded to only about 81 percent capacity at a freight premium of 23 percent over the fully loaded rate.¹¹

(4) In summary, for lack of adequate POL receiving and redistribution facilities in Vietnam, it was necessary to transship via Singapore and Japan, backhaul products from Japan, and use tankers in Vietnam as floating storage. Continuation of these expedients added significantly to the cost of POL support to Vietnam.

b. Flexibility of MSTIS Vessels Vis-A-Vis Commercial Vessels

(1) Tankers enroute to WESTPAC from the Arabian Gulf commonly transited the Strait of Malacca and passed Singapore. Hence, the MSTIS deliveries to WESTPAC afforded the military a substantial degree of flexibility in that loaded MSTIS tankers emerging from the Strait of Malacca could be rerouted without loss of time to Vietnam or any other destinations in the WESTPAC area where most urgently needed. This advantage was limited, however, in that many MSTIS tankers that were available were too large to be moored in Vietnam ports or could not be offloaded there without use of smaller receiving vessels.

(2) Commercial supply lines, on the other hand, were not flexible in this respect in that commercial cargoes were destined for SE Asia, often with some military products aboard. If the military products aboard could not be unloaded at the original destination, their status was not usually known to DFSC or MSTIS who scheduled MSTIS vessels. Accordingly, commercial vessels were not considered in conjunction with MSTIS vessels for rerouting to other WESTPAC areas. Similarly, in-country contractors were not kept informed of the MSTIS cargoes destined for WESTPAC so they could not consider them in conjunction with their own vessels for optimum routing of commercial cargoes destined for the military.

c. Vulnerability of Facilities. In addition to vulnerability of supplies from normal POL sources, as in the Middle East crisis, commercial transshipping facilities in the Singapore area were vulnerable to adverse political decisions, and both commercial and government facilities in Vietnam were vulnerable to enemy action.

(1) Esso, who had no transshipping facilities in Singapore itself, used its somewhat limited facilities at Tandjong Uban, Indonesia, for this purpose prior to and in the early stages of the buildup; however, near the end of Sukarno's tenure and for some time thereafter Esso was prohibited from using these facilities to support Vietnam, though Esso was permitted to use them to support Thailand.

(2) Commercial facilities in Vietnam were vulnerable to enemy action. Particularly vulnerable to mortar attack and other hostile action were the large commercial POL

¹⁰Commander in Chief, Pacific, Message 132356Z, subject: POL Tankage SEASIA (U), November 1965 (SECRET).

¹¹Defense Supply Agency Defense Fuel Supply Center, DFSC-OB, Interview held with Southeast Asia Petroleum Buyer, Washington, D. C., July 1969.

facilities at Nhabe near Saigon which, because they were contiguous, were subject to the spread of fire and widespread damage by explosion. In addition, access to the facilities by tankers would have been in jeopardy if one or more vessels had been sunk at a strategic point in the channel leading to Nhabe.¹² Lien Chieu, across Da Nang Bay some 8 miles northwest of Da Nang, the second largest facility in early 1965, was also vulnerable to enemy attack and was the first of the commercial facilities to be badly damaged by enemy action when in August 1965 60 percent of the tankage was destroyed. Since that time, there have been a number of attacks on commercial facilities including those at Nha Be, Ton Son Nhut, Qui Nhon, and Lien Chieu. The most significant losses have been at the Shell Nha Be Terminal. They amounted to approximately \$3,500,000.

(3) Prior to 1 January 1965 there had been some harassment of shipments by tank truck and by barges in the Delta area and some significant loss or damage to such transportation facilities. By then the rail facilities in Vietnam were little used because of enemy action. Subsequently there were numerous attacks on contractors' transportation equipment. Several small tankers and barges have been sunk.

4. GROWTH OF CONTRACTOR AND MILITARY SUPPORT

a. On 1 January 1965 none of the in-country contractors had adequate facilities and equipment to handle the entire military requirement. To obtain timely deliveries and also to have backup capability in the event of partial loss of facilities through enemy actions or during sudden surges in requirements, it was necessary to award concurrent contracts to all three companies. Moreover, because of the large and rapid increase in demand in 1965, the three in-country suppliers together became unable to furnish the additional product that was required.

(1) While military-owned and -controlled POL facilities in Vietnam were expanded after 1 January 1965, they together with commercial facilities continued to be inadequate. Hence, there continued to be a need to rely heavily on contractor-owned facilities, including the Singapore area transshipping terminals, to supply both Vietnam and Thailand.

(2) The large volume, the long supply lines, and the uncertainties in schedules resulted in significant disruption in the worldwide tanker schedules of the in-country contractors. Consequently, the three suppliers were unwilling to continue to commit more tankers to the military operation.

(3) Furthermore, because of the magnitude of the developing operation in 1965, CINCPAC did not deem it advisable to rely completely on commercial vessels which were foreign-flag manned by foreign crews. Thus, with the concurrence of the Joint Chiefs of Staff, MSTs provided a T-1 tanker and a T-2 tanker as floating storage on 18 February and 7 March 1965, respectively. MSTs, however, did not begin to make deliveries to Vietnam before August 1966.

b. The magnitude of the problem of POL supply in Vietnam may be gauged to some degree by the rapidity of the increase in demand.

(1) Requirements rose from 2,928,000 barrels in 1964 to 8,118,000 barrels in 1965, and they continued to rise to the peak of 48,000,000 barrels in 1969. Table 3 shows the year-to-year increases in requirements from 1965 through 1969. It shows the degree of participation by each in-country supplier and by MSTs.¹³

¹²Esso, Saigon, Presentation to Brig. Gen. F. A. Osmanski, MAC-V-44, 3 August 1964.

¹³Cong Ty Shell, Vietnam, In-Country Capability (U), 6th ed., October 1969 (COMPANY CONFIDENTIAL).

TABLE 3

VIETNAM POL REQUIREMENTS—CONTRACTOR-MSTS PARTICIPATION
(Thousands of Barrels)

CY	Shell	ESSO	Caltex	Contract Total	Contract Percent	MSTS Total	MSTS Percent	Total
1965	3,028	4,830	260	8,118	100	0	0	8,118
1966	9,500	11,989	509	22,047	87	3,353	13	25,400
1967	14,769	6,950	1,171	22,891	61	14,883	39	37,773
1968	18,187	5,190	1,265	24,642	57	18,972	43	43,614
1969*	22,604	8,889	1,842	33,345	69	14,659	31	48,004

*Second half of 1969 taken from Defense Fuel Supply Center proposed Supply and Distribution Plan.

Concurrently, there were similar increases in the military requirements in Thailand. For Vietnam and Thailand, the MSTS' share of the requirements rose from none in FY 66 to 30,152,000 barrels in FY 69 while the in-country contractors' share of the requirements rose from 22,065,700 barrels in FY 66 to 41,098,500 barrels in FY 69.¹⁴

(2) Consumption. Consumption data from Vietnam show that the actual consumption consistently fell short of the stated requirements. No specific reason was found for the differences which generally were attributed to inventory buildup, normal evaporation, pipeline and casualty losses, some overstatement of requirements due to slower force buildup than programmed, and unanticipated decreases in military operations such as the bombing halts. However, the increases in consumption generally paralleled the increases in requirements. Table 4 shows the consumption rate in both Vietnam and Thailand for each 6-month period from 1965 through 1968.

TABLE 4

POL CONSUMPTION IN VIETNAM AND THAILAND, 1965 - 1968

(Thousands of Barrels)

Period	Vietnam	Thailand	Total
Jan-Jun 65	1,701.2	1,136.3	2,337.5
Jul-Dec 65	5,083.2	2,433.3	7,516.5
Jan-Jun 66	9,014.4	3,968.2	12,982.6
Jul-Dec 66	12,841.3	5,483.4	18,324.7
Jan-Jun 67	16,402.5	6,669.9	23,072.4
Jul-Dec 67	19,880.2	8,464.2	28,345.1
Jan-Jun 68	21,312.2	10,104.9	31,417.1
Jul-Dec 68	21,743.9	10,950.6	32,694.5

¹⁴ Defense Supply Agency Defense Fuels Supply Center, Memorandum for Record, subject: Southeast Asia Contract—Asiatic Petroleum Corporation, 11 January 1969 (FOR OFFICIAL USE ONLY).

(3) **Storage in the Buildup.** At the onset of the period shown in Table 4, the POL storage facilities were barely adequate at Saigon (Nhabe), the principal port of entry into Vietnam. However, in other areas of Vietnam the facilities were grossly inadequate to handle the volume required.

(a) For the month of February 1965, military consumption in Vietnam was 189,000 barrels. At this time the entire Vietnam storage capacity amounted to only 1,672,000 barrels of which 1,167,000 barrels was commercial storage in Nhabe. The Republic of Vietnam forces had 135,000 barrels while U.S. forces had only 48,000 barrels of which 18,000 barrels was in collapsible rubber bags. Of the total storage, 670,000 barrels was allotted to military use.¹⁵ By August 1965, consumption had risen to 700,000 barrels and was projected to reach 1,200,000 barrels in December 1965. In the meantime, storage allotted to military use, including 100,000 barrels in collapsible rubber bags, amounted to some 1,200,000 barrels much of which was at Saigon where the need was not critical. The rapid increase in demand, much of it in areas lacking POL receiving and storage facilities, was met by resorting to inefficient and expensive use of tankers as floating storage.

(b) However, when military decisions were made that resulted in requirements of the magnitude reached in 1966, the accompanying requirement for large-scale, more efficient facilities to handle the increased requirement was also created. The easiest, but not necessarily the most economical or effective course to follow in the long run, seemed to be to simply urge the industry to supply, through their existing facilities or through facilities to be constructed by them, the greatly increased POL requirement under unfunded, indefinite quantity contracts under which the contractor assumed all financial risks. Such a course was unrealistic in the prevailing circumstances because the industry was being called on to make large capital expenditures in the face of official public statements that the war would be of short duration. Thus, the contractors were faced with the prospect of having on their hands after the conflict, expensive, unneeded facilities in a country where future freedom of enterprise could not be accurately assessed. On the other hand, military planners were faced with the prospect of unpredictable and significant delays in getting the facilities built through means of military construction programs. It was in this atmosphere that CINCPAC requested that the in-country suppliers be induced to build additional facilities. Accordingly, a DFSC Request for Proposals, whose delivery terms required the industry to build significant amounts of storage, was issued on 17 May 1965.¹⁶

(4) One month later, in response to Request for Proposal (RFP) 65-N-345, Esso and Caltex indicated tentative plans to build moderate amounts of storage with completion dates subject to a number of conditions. They declined to offer against the RFP or to enter into a contractual commitment requiring construction of facilities. Shell, on the other hand, in their response, stated that Raymond, Morrison and Knudsen, the U.S. Government construction contractor, alone had the in-country capability to construct significant POL facilities. Shell (Asiatic Petroleum) offered to construct limited storage contingent, among other things, on the Officer in Charge of Construction in Vietnam releasing Raymond, Morrison and Knudsen to Shell for the purpose of building storage.

(5) The inability of industry to meet the conditions of the RFP or to otherwise contractually commit themselves to build facilities without using the U.S. Government contractor, Raymond, Morrison and Knudsen was made known to CINCPAC on 22 June 1965.¹⁷

¹⁵Headquarters, U.S. Military Assistance Command, Vietnam, subject: Petroleum Operations in Republic of Vietnam (U), 2 December 1964 (SECRET).

¹⁶Department of Defense, Defense Fuel Supply Center, Request for Proposal, RFP 65-N-345, Petroleum Products for Vietnam, 17 May 1965.

¹⁷Defense Supply Agency Defense Fuel Supply Center, Letter, subject: Contract for Shell Da Nang Facilities (U), 16 January 1967 (CONFIDENTIAL).

(a) During the CINCPAC POL Conference 10 August 1965, DFSC representatives reported to the conferees that only Shell (Asiatic Petroleum) had offered under the RFP and that offer was conditioned on the U. S. Government releasing Raymond, Morrison and Knudsen from other military construction and assigning a sufficiently high priority to permit completion of facilities by April 1966. Hence, Shell had not offered to use a construction capability over and above that which the Government already had. Further, the conferees were informed that Esso did not commit itself to building storage but informally had indicated that with respect to any storage it built, a surcharge would be added to future contract prices to recover its investment in not more than 1 year, with no assurance that the surcharge or a part thereof would not be continued beyond 1 year.

(b) Neither contractor's plan provided for adequate integrated facilities at locations where needed to handle the increasing military requirement. Hence, military construction and the use of collapsible tanks were needed to meet the barest minimum needs. Military POL construction plans were required to avoid duplicating commercial construction, the completion of which was in doubt. Thus, planning and programming of POL facilities was divided between military organizations who were responsible for military construction, and in-country contractors who were contemplating commercial construction but making no contractual commitment to do so.

(c) One exception to this division, however, was the service contract with Shell for construction and use of the China Beach complex at Da Nang. Shell had at Da Nang the materials to build an efficient mooring and storage facility and was willing to contract with the Government for use of the facility when completed. After long negotiation, during which the contractor made an unsuccessful attempt to complete the sea line, a contract was awarded to Asiatic (Shell). Construction, however, was delayed because the entire in-country construction capability was committed to other military construction. It was finally completed in January 1967, for Shell, by the Officer in Charge of Construction, Vietnam after the Director of Construction, Military Assistance Command, Vietnam (MACV-DC), had authorized the use of Raymond, Morrison and Knudsen capability for the purpose of completing the work.

(d) Thus, the premise that the in-country suppliers could build substantial amounts of storage without decreasing the general military construction effort proved to be invalid.

5. IN-COUNTRY POL CONTRACTS

a. In-country contracts prior to 1965 were of the standard POL type designed for simple off-the-shelf purchases under normal conditions. They provided for delivery, on call, of the products specified in stated quantities to specifically named locations in Vietnam. The military requirement in 1964 was only 2,900,000 barrels.

(1) In 1965, however, the requirement jumped to 8,100,000 barrels. As a result of the increased tempo and shifting combat operations, requirements changed frequently. Requests for purchases were submitted to DFSC on a piecemeal basis for deliveries at new locations where the fighting dictated the need. Sometimes the requirement was received after the product had been ordered, accepted, and used. The DFSC contracting officer ratified such agreements by contract amendment.

(2) Often quantities purchased for delivery to certain locations went unordered because shifts in the fighting to other locations had eliminated the specific requirement. As the requirements rose and locations became more numerous, frequent small-emergency procurements and contract changes were necessary. As the capabilities of the oil companies became marginal, orderly contracting in the normal manner became difficult. Effective competition had disappeared, and often one contractor had to be called on to make delivery to locations covered under another contractor's contract. Moreover, price analysis became next to impossible, and the urgency of the situation did not allow adequate time for negotiation.

(3) The Sub-Area Petroleum Officer, Vietnam, sent each change in requirements by message through the CINCPAC channel to DFSC and the inventory control points. DFSC was not authorized to take contractual action until furnished the authenticating Military Inter-departmental Procurement Request (MIPR) by the ICPs.

(4) Notwithstanding these conditions, no contract administrator was assigned to Vietnam, and direct communication with the contracting officer was not authorized.

b. It was apparent that in this environment drastic changes were needed in the kind of contracts used and in the contracting procedure employed. It was also apparent that the contract had to be more flexible to be manageable. Furthermore, it was evident that some better means was necessary to analyze the overall pricing structure to obtain for the Government the economies that volume should bring and to price out the abnormal costs that resulted from not having adequate facilities. Piecemeal procurement under numerous contracts and changes, in response to emergency requirements from CINCPAC as delivery was required, did not permit proper price analysis or the flexibility and control that were required.

c. Accordingly, DFSC took steps beginning in early 1965 to bring about the innovations that were needed in contracts and contracting procedures to cope with the problems that were being encountered in both Vietnam and Washington. Some of the steps that were taken were as follows:

(1) Estimated requirements of each product to be supplied through in-country contractor terminals at each ocean terminal for 1 year, by 6-month periods, were obtained.

(2) The quantity of each product to be supplied or services to be performed by each contractor during a given period was covered by a single contract.

(3) Locations to which ultimate delivery was to be made were covered in more than one contract. No contract limitations were placed on amounts to be supplied from each terminal or to each destination, though the total contract quantity was not to be exceeded.

(4) Deliveries to unspecified locations or deliveries by circuitous routes to specified locations (due to enemy interdiction) were covered by pricing on the basis of mileage traveled.

(5) Specific provisions were developed to cover vessel delays or diversions.

(6) Prices were broken down by price components showing components for product Free On Board (FOB) refinery, transportation to Singapore area, handling in Singapore area, transportation to Vietnam, handling in-country, transportation in-country, drumming services, and into-plane delivery. Thus, price analysis and closer pricing were facilitated.

(7) Contracts provided for delivery FOB refinery to avoid Saudi-Arabian taxes.

(8) In-country war risk charges and charges for tie-up of contractor's inventory were eliminated.

(9) The coastal vessels to be provided and the conditions governing their use were specifically set forth in contracts.

(10) DFSC furnished guidance, in the form of product allocations, to CINCPAC as to the volumes of products to be supplied by each in-country contractor and MSTs at each terminal, on the basis of proposed contract awards.

(11) DFSC included in contracts, provisions requiring the contractor to handle Government-owned products delivered by MSTs at contractors' terminals north of Nha Be. Nhabe, the main terminal, was not included, however, because the contractors declined to permit MSTs to make delivery into their facilities at that location.

(12) DFSC obtained agreement from Shell (Asiatic Petroleum) to provide the facilities and perform the services of handling cargoes from other contractors and MSTs at China Beach (Da Nang). Under this agreement, the contractor built urgently needed storage and off-shore tanker discharge facilities.

d. Because both commercial and military facilities north of Nhabe were inadequate, substantial costs were incurred owing to vessel delays and diversions. Contractors frequently delivered products for civilian use in the same vessels in which they delivered military cargo. Even though the contractor controlled the tanker scheduling for commercial and military products, the costs that were properly allocable to the Government were not always clearly defined in contracts. In view of these problems, DFSC negotiated the vessel usage provisions under which the Sub-Area Petroleum Officer was given the routing of all vessels. Under the vessel-usage provisions, the rates paid for different uses were more closely priced out, the method of cost allocation between civilian and military cargo was more clearly defined, and the conditions under which the vessels were to be provided and used were more clearly set forth.

e. Features of In-country POL Contracts. With the mentioned innovations added, the typical Vietnam in-country contract had the following features which in the main were used since 1965:

(1) Quantities. The contracts were the indefinite quantity, unfunded type that required contractors to make delivery in the quantities and at the times specified in the order. The contractor was required to deliver up-to-the-contract quantity if ordered, but the Government was legally required to order only a nominal amount.

(2) Procurement Cycle. When the basic nature of the contracts was changed in 1965, the procurements were put on a 1-year cycle to avoid, for the contractor and the Government, repetitive negotiation and other procurement effort. However, after a short trial period, the contracts were placed on 6-month periods. The shorter period was used at the urging of the in-country suppliers. They preferred the shorter-term contracts because some price elements were not subject to price escalation, and inflation was rampant at the time. In addition, some uncertainty existed about the reliability of the requirements estimated so far ahead. Hence, procurements were made every 6 months so requirements and costs could more accurately be reflected in contracts.

(3) Price Escalation. The in-country contracts contained various kinds of price escalation. Generally, the prices escalated on one or more of the following price factors:

- (a) Product market prices
- (b) Ocean transportation rates
- (c) Inland transportation rates

Only a minor part of the contracts was subject to changes in product prices at the refineries; however, virtually all of the contracts provided for adjustment of prices due to fluctuation in ocean transportation and inland transportation rates. Prices of the former escalated because the tanker market was subject to wide swings due to seasonal and other factors. A most dramatic example of such escalation was when the average tanker rates for foreign-flag tankers rose from approximately 80 percent of the International Tanker Scale (INTA Scale) to 300 percent after closure of the Suez Canal in 1967. The inland transportation rates, on the other hand, were subject to fluctuations (usually increases) caused by the forces of inflation and competition of transportation users in-country, notably U.S. Government contractors.

(4) Delivery to Government. Delivery was made from contractors' tankers into Government-controlled ocean terminals or into Government-controlled vessels by

vessel-to-vessel transfer; from contractors' primary or secondary terminals into Government-controlled tankers, barges, and tank trucks; and from contractors' barges or tank trucks into Government pipelines, storage, or aircraft.

(5) FOB Point. The Vietnam contracts provided for title of the fuel to pass to the Government as the fuel passed the ship's rail on loading at the refinery (or Singapore facilities on Asiatic's contracts). The contractor was responsible for making up all losses except those caused by enemy action and verified by the Sub-Area Petroleum Officer. These contracts were not always on the FOB origin basis. Prior to 1965, all contracts were on an FOB destination basis. However, during 1965 Esso contracts were put on an FOB origin basis primarily to avoid Saudi-Arabian taxes. Similarly, Caltex contracts were changed to FOB origin on 1 July 1966.

(6) Avoidance of Saudi Arabian Taxes. Saudi Arabian taxes were avoided on U.S. Government purchases by transferring title to the U.S. Government at the refinery. If the procurement had been on an FOB destination basis, the transfer of title to the product at the refinery would have been between affiliates, and the tax would have been computed on the basis of posted prices for the product at the refinery. By transferring title to the U.S. Government at the refinery, the tax was less, being based on the FOB refinery components-of-contract prices that were substantially and consistently below the posted prices. Monetary savings amounting to \$5,544,120 were realized by so converting the Esso FY 66 contracts. Because Esso International has provided the Government similar contract volumes for each subsequent contract period, it is estimated that the Government has realized a net savings in excess of \$19,760,940 on the Esso contracts during the period 1965-68.¹⁸

(7) Elimination of Cost of Use of Money and War Risk Insurance Charges. Cost of use of money resulted from the contractors' holding large inventories of product consigned to the Government for long periods. The contractor's problem was compounded by delayed payments for product delivered and services rendered. War risk insurance charges applied to product consigned to the Government in Vietnam but which was stored in the contractor's facility pending delivery to final in-country destinations. By accepting the risk of loss of product held by the contractor in Vietnam because of hostile action and by providing a means whereby the contractor received payment for product sooner, a savings of \$1,246,090 was realized on Esso's FY 66 contract. It is estimated that, had the Esso contracts not been awarded on an FOB origin basis, the Government would have been required to bear similar expenses for each subsequent contract period, or a total charge in excess of \$4,750,000 for the period 1965-66. Losses of Government-owned product in contractors' custody because of enemy action were relatively small. Since Shell (Petroleum Asiatic) did not supply POL from Saudi Arabia, the potential savings by avoiding Saudi-Arabian taxes was not present on Shell's contracts. However, effective 1 July 1968, Shell's contracts were put on an FOB origin basis. This transfer shifted war risk to the Government and eliminated war risk insurance charges. A price reduction was also obtained from the contractor in return for the earlier payment that resulted from the change.¹⁹

f. Contract Provisions Covering Losses of Government-Owned Products

(1) Contracts Prior to 1 July 1969. The contracts, prior to 1 July 1969, provided that the contractor would bear the cost of cargo insurance and the war risk premium for entering the high risk zone, i.e., waters of Vietnam. In addition, they provided that the contractor would be responsible for quantity and quality throughout the delivery process from refinery to destination and bear all in-transit and terminaling losses except those caused by enemy action after unloading in-country. In essence, the contractor was responsible for delivering to the Government in Vietnam and Thailand, on specification, fuel in a quantity equal to that accepted by the Government and given into custody of the contractor at the refinery. Thus, the procurement quality assurance inspectors in-country did not need to measure for quantity or test for

¹⁸ Defense Supply Agency/Defense Fuel Supply Center. Memorandum for Record, subject: Southeast Asia Contract—Asiatic Petroleum Corporation. 11 January 1969 (FOR OFFICIAL USE ONLY).

¹⁹ Ibid.

quality until the contractor made delivery into the Government's custody in-country. More important, however, was that the contractor had the incentive to hold to the minimum those losses or degradations that result from careless handling, pilferage, incorrect means of measuring, or improper allocation of losses. Nevertheless, this type of contract arrangement was discontinued for contracts beginning 1 July 1969.

(2) Contracts After 1 July 1969

(a) For contracts after 1 July 1969 the contracting officer made the determination that it was not in the best interests of the Government to continue to bear the expenses of marine cargo insurance, cargo war risk premiums, and general average coverage; but that it was in the Government's best interest to become self-insured in these areas. It was estimated that by Government assumption of all the risk for casualty losses except those due to contractor's negligence, the Government would avoid insurance premiums incurred for cargo (\$168,579) and for war risk (\$569,552) for all Southeast Asia for a 6-month contract period (approximately \$1,476,000 a year). As a result, the contracts were changed to provide that the Government would bear all casualty losses.

(b) Concurrently, the contracts were changed to provide that the Government would also bear other in-transit and terminaling losses while the Government-owned product was in the contractors' custody, i.e., from refinery, through transshipping facilities in Indonesia and Singapore, and transportation to Vietnam and Thailand. Thus, any losses against product handled during the contract period (some 22,805,000 barrels valued at \$94,718,093), while in contractors' custody, became the Government's responsibility unless due to contractors' proven negligence. It was estimated that the Government, by assuming all such risk under the SE Asia contracts, could reduce the Government's cost for each year by \$272,000 on products valued at some \$190,000,000.²⁰

(3) Analysis of Savings

(a) In referring to anticipated annual savings that result from dropping insurance coverage, the letter gave no weight to the risk involved. Prior to the decision to accept the risk for casualty losses, there had been a number of occasions when cargo had been lost or jeopardized as a result of enemy action against the contractors' vessels in Vietnam. In addition, on more than one occasion, cargo being transported from the refinery had become off-specification while in transit. Thus, classifying as savings insurance premiums avoided by dropping insurance on the premise there would be no significant accidents was questionable reasoning. The faultiness of this reasoning has been proved by experience. In the first 7 months after the Government accepted responsibility for casualty losses, there were two serious losses of cargo. The **ORIENTAL CHALLENGER** on 19 October 1969 ran onto a reef off the Cuban coast, contaminated her cargo with a loss of \$75,423, and had to be towed to Baton Rouge, Louisiana, thus incurring liability under a general averaging situation in which the cargo owner was responsible for his proportionate share of the salvaging fee.²¹ Then on 6 January 1970, the **SOPHIA** loaded with Government product was lost at sea, 600 miles off the Coast of Japan. The Government's loss on the cargo was \$633,142.²² Rather than savings shown, the dropping of insurance on 1 July 1969 resulted in substantial offsetting costs to the Government which, when finally established, may exceed the estimated savings. The general Government policy favors self-insurance of Government-owned property. The decision with respect to dropping insurance appears to have been made based on this policy rather than an evaluation of the probability of casualty losses.

(b) With respect to intransit losses, the letter, aside from the anticipated annual savings of \$272,000, gave no reason for relieving the contractor of liability except that to

²⁰ Defense Supply Agency/Defense Fuel Supply Center. Letter DFSC-C, subject: Cargo Insurance—Southeast Asia Contracts, 11 July 1969.

²¹ Defense Supply Agency, Defense Fuel Supply Center. Weekly Highlight Report, RCS 101, 5 December 1969.

²² Defense Supply Agency, Defense Fuel Supply Center. Weekly Highlight Report, RCS 101, 9 January 1970.

do otherwise was inconsistent with the Government's decision to self-insure. It was stated, however, that contracts had been priced to recognize a 1 percent loss factor for all transportation and terminaling to point of discharge in Vietnam and Thailand and that this factor had been determined to be excessive. This letter did not mention, however, that the principal contractor, for the period after 1 July 1969, on the basis of experience gained, offered to lower the loss factor to three quarters of 1 percent and the other contractor offered to use loss factors based on well-documented experience in supplying Vietnam and Thailand.

(c) No evidence or analysis was given to substantiate the conclusion that the three-quarters of 1 percent loss factor or other experience factors offered by the contractors was excessive under conditions that were encountered in making delivery to Vietnam and Thailand. In this connection, however, it is pointed out that military regulations allowed higher losses. For example, Army Regulation 735-14 allows 0.5 percent tanker transportation loss plus 0.5 percent (except Diesel Fuel which is 0.25 percent) terminaling loss. When the contractor transported the product twice and terminalled it once it appeared that, under the circumstances, the loss factor of 0.75 percent offered by the principal contractor was reasonable. Furthermore, the Government then became responsible for losses caused by pilferage during delivery. Products were subject to theft by diverting part of Government-owned cargo being pumped from commercial tankers to Government or commercial storage allocated to Government-owned inventory by cracking the valves that allow Government-owned product to pass unnoticed into contractors inventory.²³ Under the arrangement used prior to 1 July 1969 such losses were for the contractor's account.

(4) Impact on Procurement Inspection

(a) The Petroleum Inspector in Bangkok reported it was impossible to follow Government product through the different kinds of transfers being made in the Singapore area. He gave the following example: Because of the high volume of throughput at Singapore and Tandjong Ubon, it was sometimes necessary to partially unload tankers into contractor's tanks that were being emptied at the same time. Hence, it was not possible to determine the quantity discharged by using before- and after-tank gauges. The only recourse the inspector had was to resort to tanker gauges which were recognized as inaccurate or imprecise. As a result, two tankers that were making delivery to Bangkok consistently manifested significantly more product on arrival than they contained as determined by the contractor's own shore tank gauges at Bangkok (Chong Non-ri). Yet these losses were for the Government's account because the Petroleum Inspector at Singapore had no recourse but to acknowledge receipt of the quantity shown by the tanker gauges at Singapore. In addition, there were vessel-to-vessel transfers in the Singapore area which caused similar measuring problems.

(b) Prior to 1 July 1969, it was necessary to inspect for quantity only at the time the Government accepted actual custody. This function alone placed a heavy inspection burden on the severely limited inspection staff because numerous deliveries were being made, and complex problems were being encountered. Thus, while the inspection had been difficult before, the change on 1 July 1969 worsened it. It superimposed a heavy burden on top of an already heavy workload.

1. In the face of the approaching added workload, Navy Fuel Supply Office was not forewarned of the decision that caused it. It was first informed by an advance information copy of a DFSC message on 30 June 1969.²⁴ Only then could the Commander, Navy Fuel Supply Office, who was responsible for providing the additional inspectors that were required, take steps to augment the staff.

²³ Comptroller General of the United States, Report to Senator Joseph M. Montoya and Senator William Proxmire, subject: Investigation of the Inspection, Distribution, and Transportation of Petroleum, Oil, and Lubricants, and Related Matters, in Southeast Asia (U), 27 January 1970 (SECRET).

²⁴ Defense Supply Agency/Defense Fuel Supply Center, Memorandum to Joint Logistics Review Board, subject: Personnel Action to Acquire Inspection Coverage, 4 February 1970.

2. Because of the time required to hire inspectors and because the State Department had to obtain the requisite authority from the Singapore government to add to the staff, the Navy Fuel Supply Office experienced considerable difficulty in augmenting inspection capability at Singapore. The first of the three additional inspectors (there had been only one) that were required at Singapore did not arrive until November 1969 and the last arrived in December 1969.

(c) The reasons have not been established why the contracting officer decided that the Government should assume intransit and terminaling losses on Government-owned product in custody of the contractors as it moved through each step of the contractors' complicated supply chain. It reduced the contractors' incentive to minimize losses and placed the overburdened inspectors in a situation in which the validity of measurements could not be assured.

(d) The contractors' offer to accept a loss factor of three-fourths of 1 percent or a factor based on detailed supporting data appeared reasonable when compared to the established Government allowable losses. Furthermore, if the loss factors offered by the contractors were considered excessive, they could have been negotiated downward, and, failing this, a thorough audit could have been made to establish loss factors fair to both parties. In any event, the fact that the Government changed to self-insurance does not, in itself, appear to justify the change that placed the responsibility for intransit and handling losses on the Government.

g. Contractual Limitations on Contractors' Facilities at Nha Be

(1) None of the contractors would permit MSTS deliveries into their facilities at Nhabe, nor would they permit Government-owned products purchased from another oil company to be distributed through the Nhabe facilities. Moreover, because the Government had no terminal facilities in the Saigon area and because its requirements were so large, it was forced to purchase from all three companies having the facilities there. Thus, the Government, to some degree, had become a captive customer.

(2) Shell, for example, would not allow its Nhabe terminal to be used except for its own products delivered in its own vessels. This exclusive right precluded Nhabe from being used for any MSTS deliveries such as those that originated in the Arabian Gulf under the Evergreen contract or which were purchased in the United States to improve the U.S. balance-of-payments position. Esso did, however, agree to use its Nhabe facilities to handle a small volume of Government-owned product obtained under the Evergreen contract, provided Esso transported the product in its own (foreign-flag) vessels. As a result of the position taken by the in-country suppliers, deliveries to Nhabe were made exclusively in contractor-controlled foreign flag vessels. Furthermore, this exclusive right resulted in a cross-haul of some 5,000 miles excess transportation when MSTS vessels were delivering JP-4 jet Fuel from the Arabian Gulf to Guam, Okinawa, and Japan while in-country suppliers were delivering the same product from Caribbean to Nhabe via Singapore.

h. Commercial Deliveries North of Nha Be. North of Nha Be, the size of ocean terminal facilities owned or controlled by the military grew to far exceed the size of commercial facilities. As a result, as military construction progressed, the Government was no longer a captive customer and, thus, was free to purchase the products from any source and to transport them to Vietnam in MSTS tankers. Yet substantial volumes continued to be purchased from in-country suppliers and delivered in their foreign-flag tankers. This continued purchase was done in consonance with a policy of maximum reliance on in-country contractors which was reaffirmed from time to time by the Joint Petroleum Officer, CINCPAC, in conferences at which the "Product Allocation" was decided.

i. Features of Service Contract With Asiatic Petroleum (Shell)

(1) The agreement under which Asiatic Petroleum constructed and provided facilities and performed services at China Beach (Da Nang) was covered by Contract No. Defense

Supply Agency (DSA) 600-66-D-0591.²⁵ The agreement required the contractor to construct and operate Da Nang (China Beach) tanker discharge and storage facilities. The contractor bore all cost of construction, retained title to the facilities, and was paid, in the throughput rate, a factor to amortize the actual cost of the facilities plus interest in approximately 2 years. In consideration of this payment, the Government was given first priority to use of the facilities at favorable throughput rates for 10 years provided it exercised its option after the first 2 years to continue to renew the contract annually for the 8 subsequent years.

(2) The contractor on the other hand could use the facilities for receiving or storing commercial products to the extent the facilities were not required for military products. For such use the contractor was to pay the same amortization rate as the Government for a period of 10 years from completion of the facilities. Hence, to the extent there was commercial use for the facilities, the contractor was to reimburse the Government for amortization charges already paid. Similarly, the contractor was required to pay throughput charges at the same rate as the Government. The throughput rate to be paid was to be adjusted annually, on the basis of cost incurred after the first 2 years. Thus, the contractor's use of the facilities, concurrent with Government use, or exclusively after the Government no longer needed the facilities, reduced charges to the Government for both amortization and operation.

(3) Since the contract contained no restriction on the source of the products put through the facilities, the Government was free to buy the products in the open market. Thus, the service contract obtained for the Government benefits in flexibility and economy. Use of this kind of service contract to give Government control over commercial facilities had significant advantages over the kind of contracts required to cover deliveries through Nhabe.

j. Contract Administration Functions

(1) In Vietnam, there was no contract administrator or administrative contracting officer as such assigned to perform the contract administration functions set forth in Armed Services Procurement Regulation 1-406. In recognition of the continuing need for better contract administration in both Vietnam and Thailand, the Commander, DFSC, notified CINCPAC that he proposed "to contractually appoint the Sub-Area Petroleum Officer, or other Government official if so desired by the commander concerned, as the Contracting Officer's Representative."²⁶ In reply, CINCPAC requested that no change be made owing to limited staffing of the Sub-Area Petroleum Office and lack of qualified personnel to assume the responsibilities.²⁷ Consequently, no one was officially assigned the responsibility and authority to oversee contract administration and contractor performance in Vietnam and Thailand.

(2) The Services' requirements to be purchased were consolidated by the Military Assistance Command, Vietnam (MACV), Sub-Area Petroleum Officer, Vietnam (SAPOV), and submitted via CINCPAC to DFSC and the Inventory Control Points (ICPs). The ICPs then validated them with confirming Military Interdepartmental Purchase Requests (MIPRs) to DFSC as follows: Army for Motor Gasoline and Diesel Fuel, and Air Force for JP-4 Jet Fuel and Aviation Gasoline.

(a) SAPOV, by the tenth of each month, furnished the contractors with an unfunded Monthly Petroleum Supply Plan showing what each contractor would be required to furnish in each of the 6 following months, in the way of product, services, and coastal vessels. Within 20 days after receiving the plan, the contractors notified the Contracting Officer and the SAPOV the extent to which they were able to provide the product and services requested by the

²⁵ Defense Supply Agency/Defense Fuel Supply Center, Letter, subject: Contract for Shell Da Nang Facilities (U), 16 January 1967 (CONFIDENTIAL).

²⁶ Defense Supply Agency/Defense Fuel Supply Center, Letter, subject: Designation of Contracting Officer Representative for Petroleum Contracts, 9 April 1968.

²⁷ Commander in Chief, Pacific, Letter 1985, subject: Designation of Contracting Officer Representative for Petroleum Contracts SEA, 18 May 1969.

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SAPOV for the second month of the plan. Thus, the contractor's notification became a commitment for the second month of the plan.

(b) To provide the necessary funds to pay for cargoes FOB refinery, the Army Petroleum Center and Air Force Detachment 29, Cameron Station, monthly placed funded orders with the contractors based on the quantities the SAPOV had requested of them by the Monthly Petroleum Supply Plan.

(c) To provide the funds for transportation and services the following procedures were carried out:

1. Air Force. Headquarters, Pacific Air Force (PACAF), issued an unfunded Distribution Plan Authorization for each contract to coincide with the contract period. The services called for by the Distribution Plan were in consonance with the services specified in the contract. While PACAF issued the Distribution Plan Authorization, Air Force Detachment 29 made provisions to have the necessary funds available for payment.

2. Army. In their monthly orders, Army Petroleum Center included funds to cover services related to the product that was ordered.

(3) The overall responsibility for administering bulk petroleum contracts was vested in DFSC, except for those responsibilities assigned to, or retained by, the military departments. Certain contract administration functions were reserved exclusively to DFSC while others, as indicated below, were assigned to the military departments and the Sub-Area Petroleum Officer, Vietnam.²⁸

(4) Until 1969 when it was assigned to the Army, procurement inspection in Vietnam was assigned to Navy. Coincidentally, the Navy was also responsible for procurement inspection at the principal sources, i.e., Arabian Gulf and Caribbean, as well as the commercial transshipping point, Singapore.

(5) Property Administrators responsible for Government-owned petroleum products in the custody of the in-country contractors were, by the provisions of the contracts, to be designated by the following: for the Air Force, Commander in Chief, Pacific Air Forces, and, for the Army, the Sub-Area Petroleum Officer, Vietnam, later changed to Commanding Officer, Army Petroleum Center. (See also Chapter V, paragraph 8.)

(6) The Sub-Area Petroleum Officer, pursuant to the terms of in-country contracts, was delegated authority to divert incoming commercial shipments to other destinations in his area, as necessary to meet military requirements. The SAPOV was also assigned the task of verifying losses due to enemy action in Vietnam.

(7) While the Sub-Area Petroleum Officer, the POL procurement inspectors, and the property administrators in Vietnam were assigned certain contract administration functions, other functions appropriate for performance in-country but not assigned to responsible officers in Vietnam were:

(a) Developing information for and making recommendations to the Contracting Officer concerning cost and pricing, sub-contracting, and contractor's procurement practices.

(b) Conducting post award orientation conferences with local personnel.

(c) Overseeing property administration.

²⁸Defense Supply Agency, Manual 4220.1, Operating Procedures for Bulk Petroleum and Coal Products, December 1965.

(d) Negotiating or advising the Contracting Officer concerning unpriced orders under the changes clause of the contracts.

(e) Assessing and reporting to the Contracting Officer potential or actual slippages in contract schedules as, for example, during the Middle East crisis.

(i) Reviewing and reporting to the Contracting Officer the adequacy of the contractor's facilities and transportation equipment.

(g) Instituting or reviewing cost reduction proposals.

(h) Developing and advising the Contracting Officer of acceptable contracting alternatives that would benefit the Government.

(i) Evaluating and reporting to the Contracting Officer on contractor's overall performance.

(j) Informing personnel responsible for receipt of products from contractors of the position to take and the procedure to follow in protecting the Government's interests when the in-country contractor's carriers misrepresented, fraudently or otherwise, the quantity being delivered to the Government.

(k) Determining whether contractors used their ships efficiently and, when demurrage occurred, whether it was allocable to the military part of the cargo or to the civilian part of the cargo.

6. FLOATING STORAGE

a. The term "floating storage" as used herein means fully operational tankships of T-2 size or larger placed on-station for extended periods of time to receive and dispense products to smaller vessels and tankers that were unnecessarily delayed in discharging cargo. These means of receiving, storing, and distributing products were used in lieu of the alternative of constructing adequate conventional mooring facilities and shore tankage.

b. There were early indications of concern as to adequacy of storage. The need for additional storage and port facilities in Vietnam was recognized as early as 7 March 1965 when floating storage was first assigned.

c. Use of tankers for storage, while a necessary and appropriate expedient for a short period of time in the absence of conventional facilities, became an expensive alternative to facility construction when continued for an extended period of time. The costs of using floating storage, together with a discussion of the advantages and disadvantages of using tankers as floating storage, are contained in Appendix E of this monograph.

7. AVOIDABLE COSTS INCURRED BECAUSE OF INADEQUATE FACILITIES

a. The cost analysis summarized below compared the actual costs of product delivery to and storage in Vietnam with those that would have been incurred had adequate facilities been available after 1 July 1966. For such facilities to have been available at this date would have required a decision about 1 year earlier. It is noted that the RFP for industry to build additional storage was issued on 17 May 1965. Although it is doubtful that there was at this time a full appreciation of the magnitude of future requirements, the in-country suppliers estimated that they would require up to 1 year to build the storage once a decision was made.

b. Avoidable Costs

(1) The quantifiable costs that could have been avoided if adequate facilities had been available were:

- (a) Dead freight on tankers going to Nha Be because of limited draft at commercial facilities there.
 - (b) Additional transportation and handling caused by transshipping products through Singapore and Japan to Vietnam.
 - (c) Product losses resulting from transshipping products through Singapore and Japan.
 - (d) Floating storage costs and demurrage on tankers awaiting discharge in Vietnam and at Singapore.
 - (e) Certain commercial in-country service charges.
- (2) Other avoidable costs not accurately quantified and not included in the analysis were:
- (a) That portion of the \$27,474,340 worth of collapsible storage that was installed for lack of regular storage after 1 July 1966.
 - (b) Pilferage during transfer and delivery by contractors and excessive losses caused by using floating storage and marginal facilities.
 - (c) The portion of \$10,310,940 cost for MSTs coastal vessels that would not have been necessary if adequate facilities had been built.
- (3) Costs used in making this analysis were contract price components pertinent to this analysis, and transportation and handling charges. These costs included:
- (a) Ocean transportation-refinery to Singapore area and Japan.
 - (b) Singapore area and Japan transshipping costs.
 - (c) Transportation from Singapore area and Japan to Vietnam.
 - (d) In-country contract charges, i.e., terminal costs, products loss, overhead and administrative costs, and profit on ocean transportation, transshipping and in-country operations.

c. Sources of Cost Factors

- (1) U.S.-flag rates for MSTs cost were obtained from the Transportation Division of DFSC.
- (2) Foreign-flag rates and other contract price components were obtained from the DFSC SE Asia Buyer.
- (3) Construction costs for military storage were obtained from the Military Construction Status Report, South Vietnam.²⁹
- (4) Costs of operation by the military or under service contract were obtained as cited in appropriate places in the cost analysis.
- (5) Costs of handling and product losses on MSTs deliveries as a result of transshipping through Japan were obtained from Air Force Detachment 29, Cameron Station.

²⁹United States Military Assistance Command, Vietnam, Military Construction Status Report, South Vietnam, RCS: DD I&L 915, 30 September 1969.

POL

d. Based on the analysis of actual costs (Appendix F) versus those that would have been incurred with adequate facilities for the period 1966 to 1969, a summary of potential savings follows:

Actual Cost	\$225,878,845	\$225,878,845
Estimated Total Cost to the Government for the 3 years with adequate facilities for discharge at:		
One-Port Discharges	145,647,000	
Two-Port Discharges		147,725,000
Potential Savings	\$ 80,231,845	\$ 78,153,845

e. Included in the cost figures above are:

(1) Actual Costs--All costs actually incurred by the Government which are pertinent to this analysis.

(2) Estimated total costs to the Government with adequate facilities for discharge include:

- (a) Delivery costs.
- (b) Construction costs.
- (c) Costs of operating the additional facilities.

f. The total cost of constructing the required additional facilities would have been \$16,560,000 for one-port discharge or \$12,420,000 for two. Thus, the analysis indicates that these costs could have been amortized in less than 1 year.

8. ASPHALT

a. In 1967, recurring problems were being encountered with respect to supply of asphalt to Vietnam. Oil company representatives in Vietnam and the Philippines reported that numerous Government organizations in Vietnam, Japan, and the Philippines were purchasing drummed asphalt for Vietnam. Requests for proposals with varying provisions were issued at different times for varying parts of the total requirement. This, the oil companies reported, resulted in small quantity procurements which in turn precluded economies inherent in supplying large lots or the development of the much more efficient method of tanker delivery and bulk distribution.³⁰

b. At the same time, Sub-Area Petroleum Officer, Philippines, reported considerable difficulty had been experienced with asphalt procurement in the Philippines owing to the lack of POL procurement expertise in that country. Difficulty was experienced in areas of adequate specifications, provisions for packaging, loading and shipboard stowage, procurement inspection, transportation arrangements, and foreign taxes.

c. To correct this, CINCPAC in a message dated April 1968 recommended that procurement of asphalt for the WESTPAC area be centralized in DFSC.³¹ Since integrated management

³⁰ Commander-in-Chief Pacific Representative, Philippines, Letter Ser. 715, subject: Asphalt Procurement in Support of WESTPAC/SEA Requirements, 7 November 1967.

³¹ Commander in Chief, Pacific, Message 092343Z, subject: Asphalt Procurement in Support of WESTPAC Requirements, April 1968.

of asphalt in support of the Department of Defense was to become the responsibility of General Services Administration on 1 July 1968, CINCPAC withdrew the recommendation.³²

d. The procurement responsibility within Pacific Command (PACOM) was then assigned to U.S. Army, Japan. However, actual procurement functions were delegated to various military activities in Vietnam. This delegation resulted in continuation of decentralized procurement.

e. In February 1970, both Asiatic Petroleum and Esso reiterated that economies could be realized through bulk shipments and that procurement of asphalt along with other POL bulk products and services would provide the best results.³³ Both companies reported that asphalt was being purchased by the Directorate of Procurement, U.S. Army, Japan, through U.S. Army Procurement Agency, Vietnam, which issued a request for proposals for some 400,000 drums of asphalt, a quantity large enough to justify developing a bulk storage capability to permit more efficient and economical tanker transportation and bulk handling. The companies indicated that consolidated purchasing through service and product contracts such as used for other POL products would facilitate establishment of the more efficient bulk handling system and also result in more economical procurement of the other drummed asphalt requirements.

(1) One of the contractors, Esso International, had made studies in Vietnam which show cost savings and other advantages of delivering asphalt in 1- to 5-ton capacity reusable containers and in tank trucks. The company stated there would be distinct advantages of having all tenders for asphalt for U.S. Military in Vietnam originate from one central office.

(2) The other company, Asiatic Petroleum Corporation, with respect to bulk deliveries, stated after a year or two of effort, "Regretfully, in view of the various departments which were responsible for the procurement of asphalt, we were unable to generate anything definitive as to the Government's interest in such a proposal" and "to import quantities such as those which have been requested in drums is no doubt going to cost the U.S. Government appreciably more than it would have if arrangements had been provided for bulk procurement of asphalt. We therefore strongly recommend that the procurement of asphalt (which is a petroleum product as far as the oil companies are concerned) be put in the hands of Defense Fuel Supply Center in order to provide for an effective and economical procurement which can then be interrelated with other petroleum products to which asphalt is directly related."³⁴

f. No specific estimate has been made of what cost savings would result from centralizing overseas asphalt procurement along with other petroleum products. It is noted, however, that on other petroleum products at Saigon (Nhabe) the price, as specified in Contract DSA 600-69-D-1747, of delivery in bulk is \$9.00 (per 55-gallon drum) less than for delivery in drums. Savings could reasonably be expected to result from:

(1) Consolidated procurement of packaged and bulk asphalt requirements, and

(2) Elimination of the costs of drums and lowering of transportation costs and handling by conversion of deliveries from drums to bulk where logistically feasible.

³²Department of Defense, Defense Supply Agency. Message 142105Z. subject: Procurement of Asphalt. May 1968; Commander in Chief, Pacific. Message 040308Z. subject: Procurement of Asphalt. June 1968.

³³Esso International Inc. and Asiatic Petroleum Corporation. Letters to the Joint Logistics Review Board. subject: Asphalt Supplies in Vietnam, 11 February 1970.

³⁴Asiatic Petroleum Corporation. Letter to the Joint Logistics Review Board. subject: Asphalt Supplies in Vietnam, 11 February 1970.

9. CONCLUSIONS AND RECOMMENDATIONS

a. Conclusions

(1) The unprecedented use of contractor services in Vietnam for bulk petroleum support stemmed from continuation of the support being provided during the advisory phase of the conflict, the graduated buildup, and possibly the program assumptions concerning an early end to the war (paragraphs 2a and 2b).

(2) The combination of military and contractor systems provided effective and responsive support under extremely difficult conditions (paragraph 2b).

(3) With the deployment of U.S. combatant units in 1965 it was necessary to establish a military POL supply system (paragraph 2c).

(4) Construction of military POL facilities was delayed because of the relatively low priority assigned it by MACV (paragraph 2c(1)(c)). (See also Chapter III paragraph 3c(3) of this monograph and the Construction Monograph.)

(5) When Government-owned POL was delivered in contractor's tankers, there was difficulty in obtaining up-to-the-minute data on the quantity and location of Government assets enroute (paragraphs 2c(3) and 3b).

(6) Floating storage was required during the early stages of the buildup. Continuation of this expensive means was necessary because of the insufficiency of storage ashore. The lack of adequate storage and off-loading facilities capable of receiving the cargoes of large tankers resulted in the necessity of expensive transshipments by way of Singapore and Japan (paragraph 3a(3)).

(7) A major problem was the lack of adequate storage facilities in key locations (paragraph 3a(4)).

(8) The close interrelationship of military and contractor logistic operations, including storage of Government-owned products in contractor facilities and use of subcontractors for some of the transportation to users, created many complex problems in contract administration, facilities, and accountability (paragraphs 3b and 5f). (See also Chapter V.)

(9) Efforts to get additional storage constructed by the oil companies were largely unsuccessful and delayed planning and programming of military POL facilities (paragraphs 4b(3) and 4b(4)).

(10) The military should not, in an emergency, try to get major facilities expansion funded by contractors, expecting to pay for the construction by incremental increases in product prices with the contractor amortizing the costs (paragraphs 4b(3), 4b(4), 5g, 5h and 5i).

(11) The easiest contracts to administer and those requiring the least demand for Government inspectors were the contracts that required the contractor to deliver back to the Government the full quantities of Government-owned products put in the contractor's custody, the contractor absorbing all losses except those caused by enemy action (paragraph 5f).

(12) Changes in contracts on 1 July 1969 resulted in increased contract administration and inspection workload, greater chances of error, and probably higher costs to the Government (paragraph 5f).

(13) The service contract with Shell (Asiatic Petroleum) for construction and operation of commercially owned, military-controlled facilities at Da Nang differed from other contracts and provided for reimbursement to the Government if and when the facilities were put to commercial use. The contract was beneficial to the Government, and in economy and efficiency was comparable to Government construction and operation of facilities (paragraph 5i).

(14) Contracting Officer's Representatives should have been designated or assigned to both Vietnam and Thailand at the beginning of the buildup to ensure fully effective contract administration. This requirement was not officially recognized until 1968 when a formal request to designate such representatives was initiated but not approved (paragraph 5j(7)).

(15) Savings on the order of \$30 million a year could have been realized by building adequate military facilities for the off-loading of large ocean tankers and storage of their products (paragraph 7d).

(16) Opportunities for savings related to large-lot procurement and deliveries for either packages or bulk deliveries of asphalt were not fully exploited (paragraph 8).

(17) Despite the fact that asphalt is principally supplied by the petroleum industry, the contracting for military procurement was done separately from other POL products. The integrated management of military asphalt in overseas areas was transferred to General Services Administration in 1968 (paragraph 8).

b. Recommendations. The Board recommended that:

(PL-1) Contingency plans specifically address the following to the extent appropriate to the situation:

(a) Initial use of floating storage (conclusion (6)).

(b) The construction of facilities adequate for the off-loading of large tankers, storage, and transshipment (conclusions (3), (4), (7), (8), (9), (10), and (11)).

(PL-2) When large-scale new POL facilities are required the order of priority for providing them should be:

(a) Military construction.

(b) Contractor construction leased to the military for operation.

(c) Contractor construction and contractor management under specific conditions providing for adequate Government control and protection of Government investment.

(d) Contractor construction augmenting existing commercial facilities with clear contract provisions to establish military preferential priorities (conclusions (4), (6), (7), (11), and (14)).

(PL-3) Deliveries to overseas areas in a combat situation by commercial tankers other than under MSTTS charter be avoided whenever possible (conclusions (5) and (14)).

(PL-4) In case deliveries by commercial tankers other than under MSTTS charter are required, the Defense Supply Agency/Defense Fuel Supply Center, in coordination with the Joint Chiefs of Staff and the military departments, develop an information system on the status of the tankers and their cargo to facilitate coordination with MSTTS shipments and diversions in the event of an emergency (conclusions (5), and (14)).

(PL-5) The Defense Supply Agency/Defense Fuel Supply Center assure adequate contract administration of its overseas contracts (conclusions (5), (8), (14), and (15)).

(PL-6) Action be taken to assign procurement of asphalt for the military in overseas areas to the agency having responsibility for centralized procurement of other petroleum products, i. e., The Defense Supply Agency (conclusions (16) and (17)).

Other relevant recommendations are included in Chapters V and VII of this monograph.

CHAPTER V
PROPERTY ADMINISTRATION AND ACCOUNTING

CHAPTER V

PROPERTY ADMINISTRATION AND ACCOUNTING

1. INTRODUCTION

a. Prior to 1965, Defense Supply Agency (DSA) contracts with commercial oil companies for bulk petroleum and services were low in volume and relatively uncomplicated. There was no Government-owned product in commercial storage, and borrow and loan of product was neither necessary nor desirable.

b. The rapid expansion of force levels, increases in the tempo of activity in Southeast Asia, use of both commercial and military systems to provide supply support by all modes of transportation, commingling of military and commercial product in commercial storage, and financial accounting to the end-user created major problems in property administration and accounting which affected commercial suppliers as well as the military services.

c. The then-existing (1956-68) interservice arrangements for intratheater handling and distribution of bulk POL were effective, but under these arrangements ownership and custody were frequently not with the same Service. Although this caused no support problems, it created major problems in interservice bulk POL reporting and financial accounting.

d. Probably the single biggest accounting problem encountered with petroleum, oil and lubricants (POL) supply was the conditions under which cross-service reimbursement was performed. POL accounting has received the most adverse publicity because of the alleged \$21 million loss of POL products experienced by the Air Force in the 1966-67 time frame, which in fact was proved to be a paper loss rather than a product loss.

2. SERVICE ACCOUNTING SYSTEMS. The financial accounting systems of the Army, Navy, and Air Force are described in detail in Appendix A. Basically, the war reserve and operating stocks were financed by stock funds from time of purchase until issue units, when payments were made from the operation and maintenance appropriations (O&MA). Unlike the other Services, the Army did not extend the stock fund into Vietnam.

a. The Army Stock Fund purchased all ground fuels. The Stock Fund was reimbursed by Theater Army O&MA Funds 30 days after purchase. In order for the Theater O&MA Account to obtain reimbursement for issues to non-Army customers prior to 1969, all copies of all issue documents had to be received by the manager of the Theater O&MA Account.

b. The Navy reimbursed the Air Force Stock Fund and the Army Theater O&MA Account for all Air Force-and-Army-funded fuels upon receipt at ports in the I Corps Tactical Zone (CTZ). From 1969 on, Navy accounting procedures applied, and the Navy billed the Air Force and Army for reimbursement for issues made to each Service.

c. The Air Force Stock Fund purchased all Aviation Gasoline and JP-4, and the Stock Fund owned these fuels until they were issued at an air base or to a non-Air Force activity. The Air Force Inventory Control Point (ICP) had central accountability for worldwide stocks of all Air Force fuels purchased by the Stock Fund. In order for the ICP to obtain reimbursement for issues to non-Air Force customers prior to 1969, copies of all documents had to be received by the ICP.

3. RESPONSIBILITIES. The POL responsibilities in general are described in Chapter II. The various agencies specifically concerned with contract administration are:

a. Defense Fuel Supply Center. "The overall administration of Defense Fuel Supply Center contracts for bulk petroleum is the responsibility of the Defense Fuel Supply Center."¹ Specific responsibilities include:

- (1) Ruling on complaints by the contractor or the military departments, and
- (2) Assignment of a contract administrator or administrative contracting officer to perform the contract administration functions set forth in Armed Forces Procurement Regulation 1-406.

b. Military Departments. The military departments are assigned specific geographical areas overseas for petroleum procurement inspection.²

c. Quality Assurance Representatives. Petroleum procurement inspectors, i.e., Quality Assurance Representatives (QARs), have responsibilities listed in Defense Supply Agency Manual (DSAM) 4155.1, March 1965, for certain contract administration functions, including property administration. (This subject is covered in detail in Chapter VI of this monograph.)

d. Contractor's Responsibilities. The contract with the Asiatic Petroleum Corporation (Shell) for the period 1 January 1969 to 30 June 1969 was typical of the SE Asia contracts. In general, this contract imposed the following responsibilities on the contractor as to safeguarding and accounting for Government-owned product in its custody.

"(1) The contractor shall receive and account for that quantity of Government-furnished product received into its shore facilities.

"(2) The contractor is responsible for reporting all losses attributable to hostile action to the Government, and for subsequently furnishing the Government a certified statement setting forth the circumstances of the loss.

"(3) The contractor is responsible for storage losses attributable to negligence, normal leakage, evaporation, and handling from the time the product is received in-country until delivery is effected to the Government.

"(4) The contractor is responsible for the quality of all product accepted into its terminals which is consigned to the Government, whether contractor- or Government-furnished.

"(5) The contractor is responsible for submitting appropriate stock accounting reports to the Government.

"(6) The contractor is responsible for verifying deliveries of aviation fuels by use of meters at contractor's fill stands in Vietnam.

"(7) With respect to truck deliveries in Thailand, the contractor is responsible for sealing domes and outlets, as well as for reporting dispatches of each truck to destinations in Thailand."³ (This procedure also required the contractor to furnish such particulars as destinations, type and volume of product, carrier identification, and the like.)

4. COMPLEX CONTRACTS

a. To obtain the benefits of tax exemptions provided to the United States by host countries, on 1 July 1965, DSA contracted for fuel in which the U.S. Government accepted ownership of the fuel prior to final delivery. The contract also provided for Government-owned fuel to be held in the custody of commercial petroleum suppliers in Vietnam. This new type of arrangement created the necessity for contract administration in more detail and in greater depth than had previously been required.

¹Defense Supply Agency, Manual 4220.1, Operating Procedures for Bulk Petroleum and Coal Products, para. 2.2.1, "Contract Administration Responsibilities," December 1965

²Defense Supply Agency, Manual 4220.1, Operating Procedures for Bulk Petroleum and Coal Products, December 1965.

³Defense Supply Agency, Contract 600-69-D-0576, 1 January 1969.

b. The complexity of the contracts is evidenced by the minutes of the Commander in Chief, Pacific (CINCPAC)-Joint Petroleum Office (JPO) Conference held 14-16 November 1966, applicable portions of which are quoted below:

"a. Uniformity. The SAPOs (Sub Area Petroleum Office) felt that DFSC (Defense Fuels Supply Center) should endeavor to make the contracts as uniform as possible.

"Comment: The contracting officer pointed out that in our negotiations we had made every effort to do this. However, by the nature of the individual contractor's corporate structure and mode of operations it was necessary to finalize the written agreement in accordance with the wishes of the contractor. In addition, in order to take advantage of the savings to be realized on direct product sales ex Saudi Arabia, it was necessary to establish different pricing arrangements with Esso and Caltex. Examples of lack of uniformity are as follows:

"a. Caltex has three separate contracts; one for product FOB Persian Gulf; one each for Thailand and Vietnam providing for ocean transportation to the country concerned, and receipt, storage, and inland distribution including drums, drum and truck fill, as well as deliveries at service stations in Thailand. Caltex contracts do not provide for vessel usage. Further, Caltex would not agree to handling other than Caltex product.

"b. Esso has one contract; however it is very complex, and contains language clearly denoting an FOB origin purchase to satisfy the auditors for the Saudi Arabian government and also contains language to identify destination purchase so as to conform to the 1904 Act requiring transport of Government product in U.S. Flag vessels. This contract provides for all the necessary attendant services for various delivery methods to any accessible location as required by SAPO Thai and SAPO Viet. In addition the contract contains vessel usage provisions commencing at time of vessel arrival at first port of call, as well as use of coastal shuttles and barges. Further, and because of the numerous product sources, it was necessary to provide for numerous freight rate schedules to cover the combination of loadings. An innovation in the current contract is the clause pertaining to the Monthly POL Supply Plan which sets forth the government/contractors means of exchange of requirements and capability data and involves the extent to which the Government requires/requests the contractor to furnish vessels and distribution facilities for both contractor and 3rd party product. This clause also denotes the extent of Esso responsibility and liability with respect to quality control and quantity determination for 3rd party product.

"c. Asiatic has one contract covering essentially the same products and services as Esso; however, since Asiatic's central point of operations is in Pulau Bukom, Singapore, (with refinery and est. 10,000,000 barrels of storage), the contract is less complicated than Esso's. Due to the limitations placed on the Government by Asiatic, the provisions for vessel usage and coastal shuttles are much more complex than Esso's and the privileges of the Government with respect to the handling of 3rd party product through the Asiatic facilities are much more restricted than with Esso. Further, Asiatic would not accept what can be considered a reasonable degree of responsibility for 3rd party product.

"d. Notwithstanding the foregoing comments it was generally accepted that the contracts were as uniform as could be obtained under the circumstances; i.e., the Government is faced with being somewhat of a captive customer in a monopolistic situation, and although the clauses are not as good as we would like, this is as far as industry would go.

"b. Certification of Billings. Both SAPO Thai and SAPO Viet interpreted this clause as an administrative burden which they could not fulfill.

"Comment: The clause was poorly worded and it was agreed that the paying services would establish procedures for certification as required except for authentication of vessel usage and mileage for inland deliveries. Current contracts will be modified and new contracts will be written to conform to the wishes of the service ICPs (Inventory Control Points) and the SAPOs.

"c. Drum Clauses. The current contracts differ in one respect from the previous contracts; however, both SAPOs requested that DFSC take the following action:

"(1) When drums which are the property of the Government have been tendered to the contractor for credit allowance and such drums are rejected as unsuitable for reuse, the contractor would notify the SAPOs instead of the Property Disposal Offices.

"Comment: This clause has been a part of previous contracts in Vietnam and Thailand; however, the contracts shall be modified to delete reference to the PDO.

"(2) Return of Drums. Both SAPOs were concerned that the credit allowance is based upon 'return by the Government to contractors' terminals.'

"Comment: Previously the contractor credited the Government on drums turned over to the contractor at 'point of acceptance.' This change was required by the contractor since a great deal of loss was being experienced caused by stealing and switching of drums transported by the contract haulers. The contracting officer advised the SAPOs and CINCPAC that we will again endeavor to negotiate some workable solution. This problem is of major concern particularly in Thailand where there is no military transport capability. In Vietnam most of the drums are transported by air since road routes are interdicted by the enemy. Return of an empty drum by air is extremely hazardous and it is doubtful that it is being done extensively.

"d. Designation of Property Administrator. The current clause designates COMUSMACV [Commander, U. S. Military Assistance Command, Vietnam] and COMUSMACTHAI [Commander, U. S. Military Assistance Command, Thailand] as the property administrators for ground fuels. This was considered an unnecessary burden and neither SAPOMACV nor SAPOMACTHAI knew what the duties of a property administrator were.

"Comment: It was agreed that any reference in the contract assigning this duty to MACV or MACTHAI would be amended to indicate that designation of the property administrator would be made by the ICPs or their designees. It was pointed out to the SAPOs that the ASPR (Armed Services Procurement Regulations) and the general provisions of petroleum contracts direct that whenever Government property is furnished in connection with a contract, a property administrator will be designated to account for such property."⁴

5. ACCOUNTING AT ADMINISTRATIVE LEVEL. The problems of contract administration included duplicate billing, improper pricing guides, inadequate controls, and inaccurate inventories. These and other problems were evident in such areas as Government-owned POL in custody of contractors, commercial delivery procedures, barge shipments, uncalibrated tanks and bags, and shipments from fuel depots without meters. As late as June 1968, the contractors, operations and records were not reviewed on a continuing and systematic basis, and, as a result, there were instances in which the contractor billed twice for the same product, and/or had borrow and loan transactions outstanding as long as 6 months beyond the contract period. Effective control over the request for and delivery of POL products from commercial sources to authorized users was not established. Requests were placed directly on commercial oil companies by various individual users throughout Vietnam. As a result, the quantity of petroleum products ordered from and delivered by the contractors was not known.

6. PROBLEMS ASSOCIATED WITH DISTRIBUTION

a. The complexity of the distribution system and the difficulty of financial accounting for reimbursement are indicated by the following example in the Saigon area in 1968:

⁴Commander in Chief, Pacific - Joint Petroleum Office, Minutes of Conference, Enclosures 2-7, 14-16 November 1966.

POL

(1) In the Nha Be commercial storage site, Esso and Caltex received Government-owned product as well as their own product. Shell (Asiatic Petroleum) received only their own product in their tankage. Bulk POL was outloaded into either industry- or Army-controlled barges or tankers for water delivery and into industry, contract, or Army tank trucks for road haul. Host country's tank trucks also picked up bulk POL from commercial suppliers at Nha Be under the Military Assistance Program (MAP), coordinated through MACV.

(2) An Army-controlled Y-boat or barge picked up JP-4 and delivered it to the Binh Loi bridge site for delivery through the Army pipeline to Tan Son Nhut Air Base. The pipeline was connected to Shell, Esso, and U.S. Air Force tankage at the base. The Army pumped the product into whatever tankage was available as coordinated with Air Force and industry representatives. The pipeline was primarily for JP-4, Aviation Gasoline (AVGAS), and Automotive Gasoline (MOGAS); diesel requirements were delivered to the base by tank trucks from either industry or military sources.

(3) At Tan Son Nhut, there were U.S. Army, Navy, Air Force, and Marine aircraft, as well as Royal Thai, Republic of Korea, New Zealand, Philippine, Royal Australia, and Vietnam Air Force aircraft. In addition, Air America; Military Airlift Command (MAC); and charters, e.g., Pan American, Braniff, Continental, Flying Tigers, Southern Air Transport; and all other commercial aircraft, both U.S. and foreign registry, were refueled there. For refueling the above aircraft, Esso, Caltex, Shell, U.S. Air Force, U.S. Army, and U.S. Navy all had tank refuelers, and the supply source was from the storage noted above.

(4) To support Bien Hoa Air Base, Army-controlled barges delivered JP-4 fuel from Nha Be to Bau Long where it was pumped into Air Force-controlled tankage at Bien Hoa Air Force Base. AVGAS, diesel, and MOGAS were normally delivered by Army trucks, supplemented by industry tank trucks, from the Long Binh tank farm. Deliveries sometimes were also made from Nha Be by either military or commercial tank trucks. At Bien Hoa, Air Force, Army, MAC, charter, and transient aircraft refueled. Ground products were issued to customers as required.

(5) At all times a large quantity of both 55-gallon and 500-gallon drums of product, both ground and air, were spotted for ready airlift to any destination. This situation was also true for the air base at Cam Ranh Bay. Delivery of these containers was to Army, Marine, Navy, Air Force, or host nation as directed and required, and was subsequently issued to Army, Navy, or Air Force as needed at the point of delivery. It was not unusual for the Army to package JP-4 in 500-gallon bags out of Army storage, and for the Air Force to then deliver the bags to Pleiku, Phu Bi, or Dong Ha where Army, Navy, Marines, or Air Force would use it. In the 3-month siege of Khe Sanh, for example, the Army air-dropped fuel from Cam Ranh Bay to the Marines—no signatures were received.

(6) Supplementing all of the above, the U.S. Air Force bladderbirds out of Tan Son Nhut or Bien Hoa at times flew as much as a million gallons of jet fuel a month to areas isolated or cut off from a ground line communication. Dak To, Kontum, Pleiku, Ban Me Thout, Cheo Reo, Dalat, Gia Nghia, Song Be, Quan Lai, Phuoc Vinh, Xuan Loc, Bao Loc, and others received fuel in this manner. Air Force crews rarely obtained signatures for fuel delivered.

b. The following paragraphs are selected examples of the way in which bulk fuel issues at I Corps at Da Nang might be handled in 1968.

(1) The Army owned all ground product (MOGAS and diesel fuel) that entered Vietnam by commercial tanker. All aviation product (AVGAS and JP-4) was owned by the Air Force. If the product was offloaded into Shell Oil Tankage ashore or into Military Sea Transport Service (MSTS) floating storage, then it remained owned by the Army/Air Force. If the product aboard the commercial tanker was to be offloaded into Esso tankage at Lien Chieu, the product moved from the tanker (Army/Air Force-owned) to an AOG (Navy Stock Fund) which transported the product to the Lien Chieu Esso facility (Army/Air Force-owned). The product was then delivered by Esso tank truck to the Army, Air Force, Navy, Marines, or commercial, requiring purchase from the Army or Air Force.

(2) Once the product was in Shell tanks ashore (Army/Air Force-owned), it could be pumped by pipeline to Navy tank farms (Navy Stock Fund) from which it would be pumped to Air Force, Navy, or Marine Tactical Airfield Dispensing System (TAFDS); or the product in Navy tanks could be transferred to Navy, Army, Air Force or Marine bladder-farms by military tank truck (requiring purchase from the Navy Stock Fund). Transfer was also made from Shell tanks to military and civilian customers requiring transfer of ownership from the Army or Air Force. To make such deliveries, the product could go from commercial tanker (Army/Air Force ownership) and then via commercial tank truck to a Navy using unit (Navy Stock Fund).

7. ACCOUNTING PROBLEMS AT FIELD LEVEL.

a. Financial accounting procedures used by Army Class III supply points were not adequate to control POL shipments released for direct delivery or transshipment to consignees. Signed receipts were not always obtained from consignees. Witness, for example, the following:

(1) Eleven 5,000-gallon tanker-trucks loaded with product enroute to Forward Support Areas (FSAs) were destroyed by enemy in 1 day's operation.

(2) Some of the deliveries by airlift were air-dropped when aircraft were unable to land because of enemy fire; thus, only a few signed receipts were obtained for this type shipment.

(3) All shipments to FSAs were consigned to Army activities although the Air Force was predominant user of product in several areas.

(4) At supply points within FSAs, product was stored and dispersed from rubber bladders and 500-gallon drums with no means to measure quantities delivered to consumers.

(5) Delivery means was self-service, and no issue documentation was made at these points even when the consumer was a reimbursable customer.

b. It was impossible to get all reimbursement issue documents collected and forwarded to a central accounting office; thus, reimbursement billings were traditionally understated. The difficulties, associated with marginal facilities in a fluctuating situation, resulted in inaccurate or a complete lack of audit trails. Included in the General Accounting Office (GAO) Draft Report of 27 January 1970, which highlighted these deficiencies, were conclusions that:

"...the existing system for distributing, inspecting, accounting, and making payment for fuel supplies and administering fuel activities is not satisfactory for use in areas where fuel activities are unstable and unusual circumstances prevail.

"...many problems still exist in the function of supply, storing, and distribution of fuel; some progress has been made toward improving conditions as they appear to have existed prior to July 1968.

"...the existing system for distributing, inspecting, accounting, and paying for POL may function satisfactorily in areas where operations are stable. For example, we found that this appeared to be generally the case in Taiwan, Okinawa, and the Philippine Islands."⁵

8. AMBIGUITIES IN CONTRACT ADMINISTRATION

a. A fundamental problem in POL contract administration in SE Asia derived from the fact that DSA understood that it was enjoined from having adequate field representation in overseas areas. Department of Defense (DOD) Directive 4140.25, Management of Petroleum Products, January 6, 1965, and its implementing instructions were unclear in the relationship and responsibilities of the Defense Supply Agency/Defense Fuel Supply Center and other DOD activities as to the preeminent role of DSA/DFSC in contract administration for POL in overseas areas.

⁵General Accounting Office, Draft Report, Investigation of the Inspection, Distribution, and Transportation of Petroleum, Oil, and Lubricants, and Related Matters, in Southeast Asia (U), 27 January 1970, pp. 4, 5, 134. (SECRET).

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In particular, DSA interpreted paragraph VI B. 2. c. of the Directive to mean that it must rely solely on Service agencies in overseas areas. This paragraph states "Direct and control procurement inspection of all petroleum items world-wide. In overseas areas established inspection facilities of the Military Departments will be used." ⁶

b. DSA, in DSA Contract 600-10367, Modification Number 1, dated 1 July 1965, delegated a part of its contract administration responsibilities as follows:

"c. Government Responsibility for Processing Claims:

"1. Designation of Property Administration. The Property Administrator for Air Force owned product will be designated by the CINCPACAF [Commander in Chief, Pacific Air Force]. The Property Administrator for Army owned product will be the Sub-Area Petroleum Officer, Vietnam.

"2. Inspector and Sub-Area Petroleum Officer. The Government Inspector or the Sub-Area Petroleum Officer will investigate all product losses reported by contractor as being the responsibility of Government. . . ."⁷

In "1" above, inconsistencies in the use of command channels are noted in that the contract designated but one Property Administrator, the Sub-Area Petroleum Office, Vietnam (SAPOV), a staff officer on the Military Assistance Command, Vietnam (MACV), J-4 staff, and only for Army fuels, then stipulated that CINCPACAF designate a Property Administrator for Air Force owned product.

(2) In "2" above, responsibility to inspect and report (all) product losses was split between the Government Inspector (Navy) and the SAPOV. In addition, the Air Force Property Administrator was responsible for "property administration" of Air Force product. This situation continued through 1966.

c. As late as November 1966, U.S. Military Assistance Command, Vietnam (USMACV), was unable to carry out its responsibility of "Assisting the DFSC in the execution and administration of DFSC off-shore petroleum supply and service contracts as requested by CINCPAC or specified by the provisions of the contract" as it concerned property administration. ⁸ Further, USMACV (SAPCV) approved the designation of Service Property Administrators, thus splitting the responsibility three ways as well as causing a duplication of this function where more than one Service, in addition to the Procurement QAR, placed requirements for reports and made visits and calls to the contractor's facilities. A DFSC Contracting Officer's Representative had not been assigned to USMACV.

d. At the JPO Conference held at CINCPAC in November 1966, the duties of Property Administrator were discussed. Neither SAPOTHAI nor SAPOV had knowledge of or were familiar with the duties of property administration. Thus it was agreed that future contracts would indicate that the ICPs would designate a Property Administrator. The responsibilities of a Property Administrator are included in those assigned to the Procurement QAR. ⁹

e. Effective with DSA Contract 67-D-0623, 1 January 1967, the Army Petroleum Center was identified to designate a Property Administrator for Army products, and the Commanding General, 1st Logistical Command, was so designated. Effective 1 July 1967, the Commanding General, 1st Logistical Command, appointed his first Property Administrator, and by 1 January 1968, had appointed Property Administrators for each of his Support Commands. However, neither CINCPACAF nor Commanding General, 1st Logistical Command, were responsible for the receipt, storage, or distribution of POL in I CTZ. ¹⁰ The QAR's responsibilities were transferred from the Navy to the Army on 1 January 1969, although the Naval Support Activity, Da Nang, carried out procurement inspection responsibilities for the Army in I CTZ. In mid-1969, the Navy requested and received authority from DSA to designate a Property Administrator in I CTZ.

⁶Department of Defense, DOD Directive 4140.25, Management of Petroleum Products, 6 January 1965.

⁷Defense Supply Agency, Contract 600-10367, Modification Number 1, 1 July 1965.

⁸Enclosure 2-7, Minutes of Conference, Commander in Chief, Pacific, Joint Petroleum Office, 14-16 November 1966.

⁹Defense Supply Agency, Manual, 4155.1, Assignment of Procurement Inspector of Petroleum, March 1965.

¹⁰Commander in Chief, Pacific, Message 180039Z July 1965.

f. The overlapping of the contract administration responsibilities was as indicated in the following:

(1) The DSA "Overseas Petroleum Documents Packet No. 6," July 1968, identifies a list of QARs for overseas petroleum contracts. ¹¹ Identified in the Packet as QAR for Vietnam and Thailand is the Inspector of Naval Material (Petroleum Products) Pacific Area, Navy Fuel Supply Office, Code 40, Cameron Station, Bldg. 8, Alexandria, Va. 22314.

(2) DSA Contract 600-68-D-1641, effective 1 July 1968, for product delivery in Vietnam and Thailand and applicable to Packet No. 6, includes a paragraph:

"F. Designation of Property Administrator.

"The Property Administrator of Air Force-owned product will be designated by the Commander-in-Chief, Pacific Air Force (CINCPACAF), APO San Francisco, California 96553. The Property Administrator for Army-owned product will be designated by Commanding Officer, Army Petroleum Center, Cameron Station, Alexandria, Virginia 22314." ¹²

(3) The effect of these latter contract provisions was to assign to the Army and Air Force some of those QAR functions assigned to the Navy without relieving the Navy of these responsibilities. In addition, it decentralized and fragmented those functions and responsibilities that in the past had proved to be accomplished best by one Service in one area. In 1969, the Army replaced the Navy in its role as POL QAR for Vietnam, but contract provisions continued to require Property Administrators, who were in fact assistants to the QAR.

g. In Thailand, the situation was complicated by divided responsibilities whereby some support responsibilities were vested in the Army; some in the POL Procurement QARs who were civilian employees of the Navy Fuel Supply Office, Cameron Station, and not assigned to a local command; and some in the contractor who was monitored by the Sub-Area Petroleum Officer, Thailand.

h. The foregoing discussion on difficulties in coordinating departmental and DSA/DFSC agency activities in petroleum matters, invites attention to the inactivation of the Directorate of Petroleum Logistics Policy OSD (I&L) in 1966, as noted in Chapter II. The inactivation of this Directorate substantially reduced joint Service participation in the making of POL policy and also eliminated a ready forum for Service coordination.

9. EFFORTS TO DESIGNATE CONTRACTING OFFICER'S REPRESENTATIVE

a. Beginning 9 April 1968, by letter to CINCPAC, DFSC attempted to designate the SAPO or one of the Property Administrators in Vietnam as Contracting Officer's Representative, but MACV (CINCPAC passed) advised DFSC that the SAPO was not qualified, and that the SAPOV office was not manned or qualified to assume the additional duties involved. It is noted that DFSC made no proposal to provide the qualified individuals needed to accomplish the required contract administration for the DSA contracts.

b. In July 1969, the Air Force ICP recommended to DFSC that coordination be made with CINCPAC to designate a qualified contract administrator under MACV. This correspondence did not result in a Contracting Officer's Representative being assigned.

c. On 5 August 1969, CINCPAC, by speed letter, requested the DFSC position on the assignment of a Contracting Officer's Representative to Vietnam. The DFSC, in turn, requested views from each of the Service ICPs. As of 1 January 1970, a contract administrator or Contracting Officer's Representative was not assigned to Vietnam.

¹¹The Overseas Packet is a standardized set of contractual forms, instructions, provisions, and clauses which becomes a part of contracts by references outlined in the contract.

¹²Defense Supply Agency, Contract 600-68-D-1641, 1 July 1968.

10. **SPECIAL REPORTS.** Further details of POL accounting and related problems are covered in Army and Air Force audit reports, a joint service team report, and a GAO report. The first is an Air Force Audit Report 5314-40, dated 23 May 1967, and the last known during this period, the GAO Report dated 27 January 1970. The audit reports addressed themselves, but were not limited to accounting.

11. IMPROVEMENTS

a. A number of steps were taken to reduce the reimbursement accounting problems. The most far-reaching of these are noted below.

(1) In June of 1968, a Memorandum of Understanding was signed by representatives of the three Services. Accordingly, the Services were billed and reimbursed for bulk POL issues in Vietnam on the basis of the MACV Monthly Bulk Fuels Report, modified to include documented, base-level issues and prorated handling losses. All Army agencies have indicated satisfaction with this system. However, the Army Accounting System differs from that of the Navy and Air Force in that financial accountability was not maintained by the Army in Vietnam after the product had been received into the Army supply system. The Department of the Army had granted a deviation from accounting in accordance with AR 735-5, Chapter 13-3. No one was relieved of item accountability which was maintained by the Army. Accounting for fuels stored and distributed by the military distribution system was relatively free of complications, once appropriate regulations were published.

(2) The Navy, to further reduce their accounting problems, on 27 June 1969, agreed to be the sole owner of all U.S. military bulk POL in the I CTZ received into shore tankage, floating storage, and coastal shuttle tankers under operational control of Naval Support Activity, Da Nang. Reimbursement was to be in accordance with the Memorandum of Understanding dated 27 June 1968, at the Washington level.

(3) In a letter dated 8 August 1969, the Air Force proposed that the Army purchase all bulk aviation fuels when delivered to the shoreline in Vietnam and then resell those fuels to the Air Force when delivered to the air bases—as was being done in I CTZ.¹³ The Army, in a letter to the Department of the Air Force, Director, Supply and Services, dated 5 March 1970, did not favorably consider this proposal on the basis that the procedures developed as a result of the 1968 Memorandum of Understanding were successful in reducing the in-country administrative workload and expediting interservice reimbursement.¹⁴ The Army also stated in a letter to the Department of the Air Force, dated 18 November 1969, that if the proposal were adopted, approximately \$125 million of obligational authority would be required by the Army, and additional personnel and resources would be required to assume the additional workload resulting from the increase in the number of transactions.¹⁵

b. To ensure that the Government received full measure of its assets in the custody of commercial suppliers as well as accurate receipts of commercial products on in-country procurement, steps were taken to reduce pilferage:

(1) In II, III, and IV CTZ

(a) A file of authorized customer signature cards was established at each call forward office.

(b) It was required that all customers forward one copy of each delivery ticket to the call-forward office.

¹³Department of the Air Force, Letter, subject: Supply Management of Aviation Fuel in II, III, and IV Corps Area, Vietnam, 8 August 1969.

¹⁴Department of the Army, Letter, subject: Supply Management of Aviation Fuel in II, III, and IV Corps Area, Vietnam, 5 March 1970.

¹⁵Department of the Army, Letter, subject: Supply Management of Aviation Fuel in II, III, and IV Corps Area, Vietnam, 18 November 1969.

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(c) Special imprinting devices were issued to all major customers who imprinted delivery tickets with a coded impression.

(d) It was required that contractors log all truck shipments in numerical sequence to each customer each month.

(e) It was required that contractors submit delivery summaries with supporting delivery tickets to appropriate call-forward office for verification of deliveries prior to submission of Form DD 250 for billing purposes.

(f) Portable meters were requisitioned and issued to customers for the purpose of verifying that quantities listed on delivery tickets were actually received.

(g) Standard Operating Procedures check lists were made available to customers for use in receiving contractor deliveries.

(h) Training classes for personnel involved with receiving contractor deliveries were conducted.

(2) In the I CTZ

(a) The Property Administrator was assigned the responsibility for developing a quality and quantity surveillance program.

(b) Navy inspectors were placed at commercial terminals to monitor issues and receipts of Government-owned fuel.

(c) A roving patrol to visit receiving sites and instruct on proper inspection procedures was established.

(d) Instructions and newsletters to receiving units for use in detecting specified techniques used by truck drivers to steal fuel were prepared and distributed.

(e) An accounting system for determining the status of Government-owned fuel in commercial facilities was established.

(f) The objectives of these steps were being realized as evidenced by the inspector's findings:

1. Hidden compartments in tank trucks capable of concealing up to 1,000 gallons of fuel.
2. False calibration rings, bolts, and tables on tank trucks.
3. Stolen company seals used for substitution on tank trucks.
4. Valves on tank trucks that could be removed without breaking seals.
5. Sandbags and water bottoms in tank trucks to replace stolen fuel.

(g) By August 1969, the program in I CTZ resulted in the discharge of 16 drivers and suspension of 40 additional drivers. Contractors had experienced an increase in civilian automotive gasoline sales by 10 percent and diesel fuel sales by 246 percent.

12. SUMMARY

a. It had been found necessary in 1965 to establish a military POL supply system in Vietnam. As CINCPAC stated:

"POL supply in RVN Vietnam has been and still is based largely on the capabilities of commercial contractors to receive, store, and issue product in the amounts and locations requested by U.S. Forces and the increased tempo of operations. Commercial capabilities have been stretched to the limit and in some cases have not been able to meet requirements. Recognizing the commercial limitations, it has become necessary to provide for a military POL supply system which is capable of augmenting the commercial system or replacing it in whole or in part insofar as U.S., RVN and 3rd country military requirements are concerned."¹⁶

b. The basic responsibilities of subordinates under the operational control of CINCPAC were clearly defined for the military supply system in Vietnam (see Chapter II). In fulfillment of these responsibilities, notable success was achieved in providing operational logistic support and in keeping the operating forces supplied throughout Vietnam under the difficult conditions faced in the expanding conflict. On the other hand, there were uncertainties concerning responsibilities dealing with contractor operations. As military advisor operations developed into a buildup of forces, unprecedented reliance was placed on contractors for the storage of bulk petroleum products and for deliveries within the combat area. Under policies that had been in effect for several years, all such contracts were under a single agency. Thus, through the DFSC, the DSA was responsible for contracting "for commercial petroleum services (such as storage and handling services, and into-plane contracts) on a worldwide basis..."¹⁷

c. The nature of the operations in Vietnam, characterized by combinations of military and contractor-subcontractor operations in response to high usage rates and dynamically changing demands of counterinsurgency warfare, placed extraordinary demands for on-the-scene contract administration.

d. The GAO Draft Report made it clear that all problems encountered were in overseas areas, and that problems in accounting were localized to unstable areas and further localized to areas where there was considerable interface between the Services and contractor-subcontractor personnel. The GAO also concluded that the existing system for distributing, inspecting, accounting, and paying for POL may function satisfactorily in areas where operations are stable, i.e., Taiwan, Okinawa, or the Philippine Islands. It was also concluded that these accounting problems existed where the contractor's product was frequently commingled with Government product, where ingenious attempts were being made to steal product, and where there existed a shortage of technically trained personnel who rotate to and from such areas on a relatively short-term basis, as has been the case in Vietnam and Thailand.

e. A prerequisite to adequate distribution controls and accurate accounting procedures is the fixing of clear and unambiguous responsibility. Steps were taken to clarify responsibilities to meet the problem of the unique combination of military-contractor systems in Vietnam by MACV Directive 701-5, 13 July 1968, which sets forth specific POL logistics responsibilities for U.S. forces (see Appendix G).

f. Other steps taken to reduce accounting problems were the agreement reached by the military departments in June 1968 to use consumption reports as a basis for interservice reimbursement throughout Vietnam, and the agreement reached between the Service ICPs in June 1969, for the Navy to reimburse the other Services for all bulk POL entering the I CTZ Area.

¹⁶ Commander in Chief, Message 180039Z, July 1965.

¹⁷ Department of Defense, DOD Directive 4140.25, Management of Petroleum Products, 13 December 1965.

g. Procedures were also instituted to ensure that quantities receipted for by the Services, when delivery was made by commercial truck, were accurate and that accounting could be made.

13. CONCLUSIONS, OBSERVATIONS, AND RECOMMENDATIONS

a. Conclusions

(1) Serious POL accounting problems were encountered in Vietnam as a result of the combat environment, the difficulty of accounting for delivery to combatant units, the extensive use of commercial oil companies for delivery and storage of Government as well as commercial products, and the use of stock funding by only two of the military departments for operating stocks of POL in Vietnam (paragraphs 2, 4a, 5, 6, and 7).

(2) The Air Force requirements for detailed accounting were incompatible with the Army's decision not to require fiscal accounting for POL in a combat area. The Air Force system was compatible with the Navy system in I CTZ (paragraphs 2, 6, and 11a(2)).

(3) There is a requirement for early resolution of the interface conflicts among the Army, Navy, and Air Force accounting systems in combat areas in order to establish a basis to facilitate interservice support and reimbursement (paragraphs 1d, 2a, 2b, 2c, and 6a).

(4) The dual distribution, i.e., military and civilian, system that evolved was undesirable from an accounting viewpoint owing in part to:

(a) The necessity for various individual users to obtain deliveries directly from commercial companies in Vietnam (paragraphs 5 and 6).

(b) Multiple deliveries by commercial modes of transportation, which were much of the time delivered by subcontractors, into uncalibrated tanks or bags with no meters to determine the accuracy of deliveries (paragraphs 5 and 6).

(c) A lack of accurate and timely information from commercial contractors on borrow and loan of Government-owned product (paragraphs 5 and 6).

(5) The extensive use of commercial facilities and contractor support in Vietnam added a new dimension to military POL operations overseas under combat conditions and exposed an unplanned contingency requirement for contract administration. The nature of the contractor operations and services in Vietnam led to complex contractual provisions (paragraph 4).

(6) A sound contract administration program is essential when Government-owned product is in custody of a contractor-supplier. There was inadequate provision for contract administration in Vietnam (paragraph 5).

(7) Ambiguity of responsibilities for contract administration resulted from assignment to various commands of partial contract administration functions in Vietnam (paragraph 8a).

(8) The QAR's responsibilities were not clearly defined. There should be a full understanding of his responsibilities and relationships for contract administration and property administration. The QAR is, in fact, the Contracting Officer's Representative for contract administration and should receive official recognition as such by the Contracting Officer. As the Contracting Officer's Representative, he may be delegated or have withdrawn certain responsibilities that are within the authority of the Contracting Officer (paragraph 8c).

(9) On-the-spot visits to Thailand and Vietnam, beginning early in the Vietnam era, by a DFSC-sponsored Field Assistance Team, knowledgeable in contract administration might have prevented, corrected, or reduced many of the problems in this area (paragraphs 3, 5, and 8a).

(10) Substantial improvements in reimbursement accounting procedures in Vietnam were placed in effect starting in June of 1968. At that time a Memorandum of Understanding was signed by representatives of each Service in which it was agreed that the Services were to be billed and reimbursed for bulk POL issues in Vietnam on the basis of the MACV Monthly Bulk Fuels Report, modified to include documented base-level issues and prorated handling losses. The Monthly Bulk Fuels Report, among other things, provides information on POL consumption by Service, by location, and by type of product (paragraph 11).

(11) To strengthen POL management further, there is a need for:

(a) Clarification of the ambiguities in division of responsibilities between the military departments and the DSA.

(b) Assignment of worldwide responsibility for surveillance over the administration of DSA contracts for supply of bulk petroleum and for service related thereto.

(c) Development of compatible procedures, regulations, forms, and other documents for the various functional areas of petroleum management among the Services and DSA, down to field level.

(d) A DOD-wide POL Field Assistance Program that will evaluate management functions performed in the field, identify potential problem areas and actions necessary to improve effectiveness and economy, determine adequacy of procedures and regulations, and recommend corrective actions to the Services and DOD activities (paragraphs 3, 5, 6, 7, and 8).

b. Observations. During the Joint Logistics Review Board in-depth study of the POL area, the members had extraordinary difficulty in tracking through the many, and sometimes involved, directives in search of a full understanding of responsibilities and relationships. The Board believes that, in particular, the difficulties in interpretation of these instructions contributed to ambiguities in understanding regarding contract administration involving the terms petroleum inspection, Government inspection, and procurement inspection; quality assurance and Quality Assurance Representatives; contract administrators, contracting officer's representatives, and property administrators. The instructions, particularly DSAM 4220.1, are in need of simplification and clarification.

c. Recommendations. The Board recommends that:

(PL-7) Planning for contingencies provide for one of the following methods of reimbursement for POL to avoid detailed accounting in a combat area, specifying either:

(a) POL be supplied by the Service responsible for interservice supply support for overseas areas on a nonreimbursable basis (conclusions (1) and (2)), or

(b) Reimbursement be provided by all Services on a factored basis with handling losses prorated similar to procedures established in June 1968 in Vietnam (conclusion (10)).

(PL-8) A Contracting Officer's Representative be assigned to any combat area where there is extensive use of in-country commercial service contracts. In the absence of a Contracting Officer's Representative, the Military Quality Assurance Representative be so designated (conclusions (5), (6) and (7)).

(PL-9) Directives be clarified to fix unambiguously on Defense Supply Agency/Defense Fuel Supply Center responsibility for and surveillance over the administration of Defense Supply Agency contracts for supply of bulk petroleum and for services related thereto (conclusion (7)).

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(PL-10) Defense Supply Agency/Defense Fuel Supply Center, in coordination with the military departments, develop and maintain compatible procedures, regulations, forms, and other documents for the supply, storage, distribution, and accounting of POL products (conclusion (11)).

(PL-11) Defense Supply Agency/Defense Fuel Supply Center, in coordination with the military departments, develop a POL Field Assistance Program to provide assistance and advice to installations and activities of the military services, other Department of Defense components, and contractor activities. The objectives of the Field Assistance Program are to evaluate management functions performed in the field; determine the adequacy of Defense Fuel Supply Center sponsored procedures and regulations; identify problem areas and recommend preventive measures; identify actions necessary to improve effectiveness and economy; and provide military services and other Department of Defense components information and advice concerning problems requiring their attention for corrective actions (conclusion (9)). A proposed revision of Directive 4140.25 is in Appendix H, and when approved will implement Recommendations (PL-9), (PL-10), and (PL-11).

(PL-12) The Joint Chiefs of Staff establish a Joint Petroleum Committee to:

(a) Advise and assist the Joint Chiefs of Staff in establishing priorities and allocations of petroleum products when required during periods of international tension and war.

(b) Resolve problems when the Services and the Defense Supply Agency cannot agree.

(c) Ensure the development and proper functioning of a Field Assistance Program.

(d) Monitor the responsibility assigned to the Defense Supply Agency in coordination with the military departments to standardize procedures, regulations, forms, and other documents for the supply, storage, distribution, transfer, and accounting for POL products.

(e) Review plans for the supply of POL in time of war.

(f) Recommend petroleum policies. A proposed charter for the Joint Petroleum Committee is in Appendix I (conclusion (11)).

(PL-13) As a matter of priority, the Defense Fuel Supply Center, in coordination with the military departments, establish a field assistance team to visit Vietnam, evaluate POL contract administration, and make specific recommendations to the Services and the Defense Supply Agency for improvement (conclusions (4)(c), (5), and (8)).

(PL-14) The Defense Supply Agency/Defense Fuel Supply Center in coordination with the military departments, and with the guidance of the Joint Petroleum Committee, if established, give high priority to the rewriting of existing instructions and directives. The purpose should be simplification and elimination of ambiguities regarding functions, responsibilities, duties, and relationships (conclusions (7), (8), and (11)).

CHAPTER VI
SPECIAL SUPPORT PROBLEMS

CHAPTER VI

SPECIAL SUPPORT PROBLEMS

1. INTRODUCTION

This chapter discusses three special problems of petroleum, oil and lubricants (POL) support: standardization, the implications of tanker ship construction trends, and inspection.

a. Extensive POL cross-servicing was required in support of the Vietnam conflict. This cross-servicing has been reviewed to ascertain the adequacy of standardization.

b. The trend toward supertankers has serious implications with regard to support of combat forces in that relatively few ports in the world have water depths or facilities adequate to accommodate them.

c. Inspection of POL was not only required by Armed Services Procurement Regulations, but elements of inspection were necessary in all phases of POL supply support.

2. STANDARDIZATION

a. There was no formal forum established by or among the Services for the exchange of information on research and development (R&D) and standardization of POL products, or on handling equipment or system. However, there were joint military and government-wide meetings held informally several times a year to discuss fuels and equipment. One such informal body was the Government Cooperative Committee on Lubrication, another was Tri-Service Fuels Operation, and another was the Working Group on Metal Working Lubricants. These meetings were called by one or other of the Services or the Defense Supply Agency (DSA) and chaired by the Service or agency that called the meetings. Meetings of these informal bodies have provided a means for the exchange of information and the solution of problems existing in the areas of R&D and standardization of POL equipment and systems.

b. During the Vietnam buildup, there was an almost constant exchange of POL tanks, bags, pipe, hoses, and other handling equipment which posed no problem in standardization. Sizes of pipe, valves, hose connections, and all other connections were standard among the Services. For example, the Army purchased 10,000-barrel tanks from the Navy, and 50,000-gallon bags from the Air Force. The Navy purchased air transportable fueling systems for refueling helicopters from the Army after it was learned that the Army had such a system in its inventory. The Air Force purchased from the Navy 10,000-barrel tanks.

c. The only adverse comments reported from operators in the field in Vietnam concerning POL standardization resulted when the Army was expanding its operations in I Corps Tactical Zone: "Navy installed pumping equipment was different than Army equipment and Army maintenance personnel were unfamiliar with replacement parts. Those parts available to Army for Army equipment were not interchangeable with Navy/Marine Corps equipment.... Local vehicle and ground communications equipment of the Army did not match channels with Navy and Marine Corps equipment on pipeline patrol and surveillance sets."¹ However, it was disclosed that these differences resulted from competitive procurement practices rather than a lack of exchange of information on standardization. The power and pump elements were

¹1st Logistical Command, Logistics-Over-the-Shore After Action Report, June 1968.

sometimes of different manufacture, thus causing temporary problems of replacement parts until the original-owning Service was apprised. The necessary parts were then provided.

3. TANKER TRENDS

a. Immediately prior to and during World War II, tankers could be categorized as to size. The small T-1 tankers were of two types: one of about 1,500 deadweight tons (dwt), the other about 4,200 dwt. The T-2 ranged from 16,000-18,000 dwt. Subsequent to World War II, the T-5 of approximately 26,600 dwt was built for a short time as a distinct class. During the last decade, tankers were being designed according to the customer's requirements and the builder's capability. Consequently, there were a wide variety of sizes and speeds. Tankers of 200,000 dwt were in being with proposed designs of 500,000 dwt. Figure 16 depicts the deadweight tonnage and age of the various tankers in the world tanker fleet.

b. At the beginning of the Vietnam era, January 1965, the U.S. tanker fleet accounted for 10.6 percent of world tanker fleet carrying capacity; but by 1 January 1968, it accounted for only 7.8 percent.² Part of the decrease was caused by an actual reduction in carrying capacity--from 8,861,000 dwt to 8,550,000 dwt, and part from the increases of other tanker fleets.

c. The trend in industry toward larger and larger tankers is indicated in Figures 16 and 17. From 1958 to 1968, the average size of commercial tankers on order or under construction had increased from 33,000 dwt to 88,000 dwt, and tankers of over 50,000 dwt made up almost one-half of the world fleet of tank ships.³

d. For an activity to receive the average cargo of petroleum products requires a minimum of 704,000 barrels (88,000 dwt) of empty storage capacity and marine facilities capable of accepting a vessel with a 45-foot draft.

(1) Five military POL facilities have the requisite combination of storage capacity, port facilities and POL usage to utilize the large tanker economically. However, unless more storage capacity is constructed, use of the large tanker requires a significant increase in operating stock capacity and a similar decrease in available war reserve stocks. How to provide adequate, economical resupply to the remaining military POL facilities (approximately 95 percent) that are serviced through marine terminals became an increasing problem as the tankers available for hire increased in size. In 1958, U.S. shipyards had 3 million dwt of tank ships under construction or on order. U.S. tanker construction declined to none on order or under construction in 1966. In 1968, there was about 700,000 dwt under construction or on order.⁴ Figure 18 shows the deadweight tons on order or under construction from 1957 to 1967. This limited or lack of tanker construction was the principal cause for the U.S. tanker fleet becoming the oldest in the world. Average age was 16 years 2 months. Over 45 percent of the total carrying capacity of the U.S. tanker fleet was constructed prior to 1948. Figure 19 gives a graphic presentation of the aging U.S. tanker fleet.

(2) The trend to larger and larger tankers in commercial operations was the result of sound economics in commercial operations. Long hauls of one liquid product from one location to a single port for discharge could be accomplished most economically by large tankers with small crews. The economic advantage for large tankers became apparent in the late 1950's when continued use of the Suez Canal became doubtful. The major transporters from the Persian Gulf to Europe were faced with an extremely long haul around Africa to Europe. Without the depth limitations of the Suez, large tankers became desirable, and only the technical capability of the shipbuilding industry limited the tanker size. The 1967 closing of the Suez Canal and the possibility that it might not reopen contributed toward a continuation of the trend to ever larger tankers. The resulting increased tanker size is graphically portrayed in Figure 20. Figure 20 also indicates that the large tankers were young and would be with the tanker fleet for a long time.

²See: Oil Company, Analysis of World Tanker Ship Fleet, 31 December 1967.

³Ibid.

⁴Ibid.

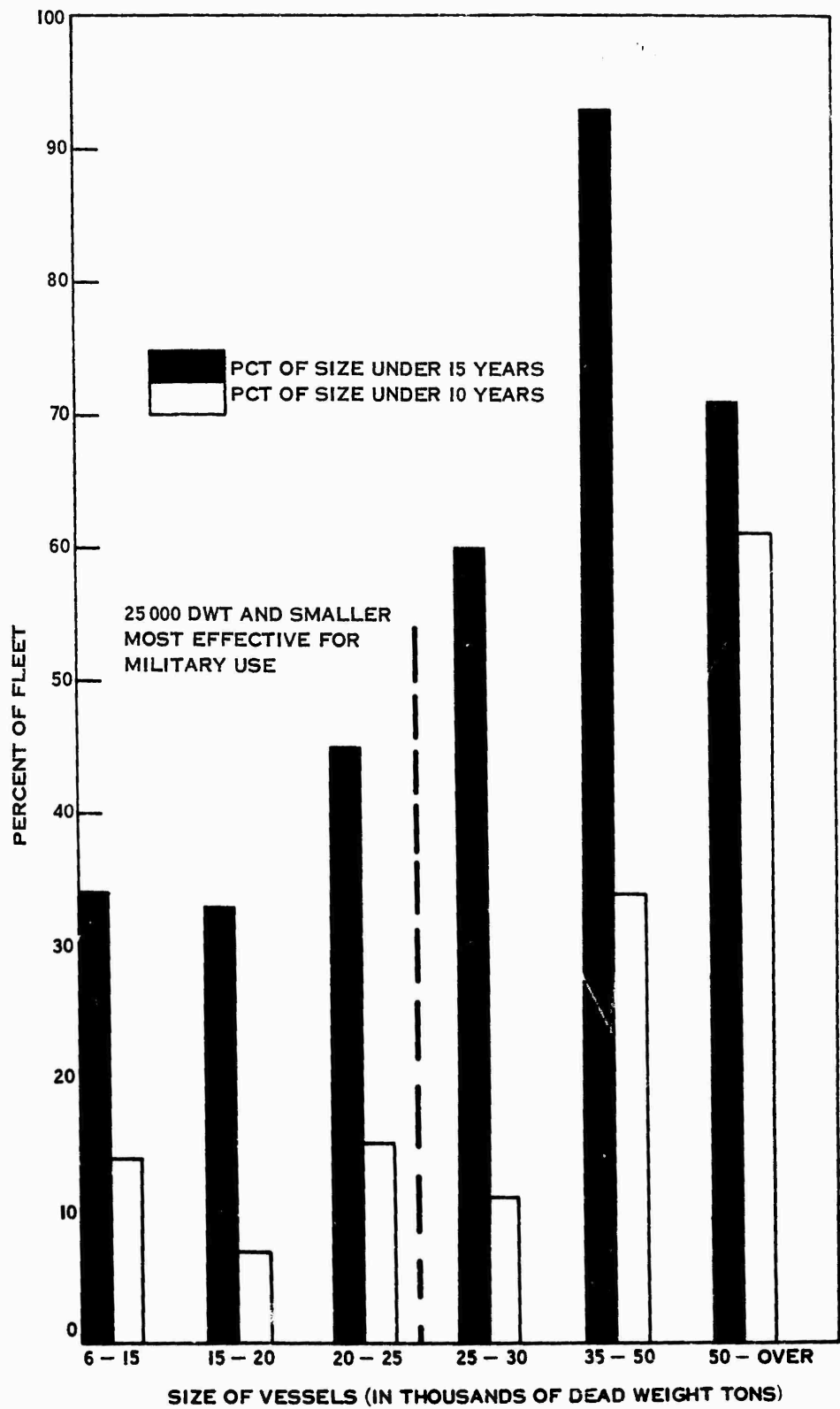


FIGURE 16. WORLD TANKER FLEET

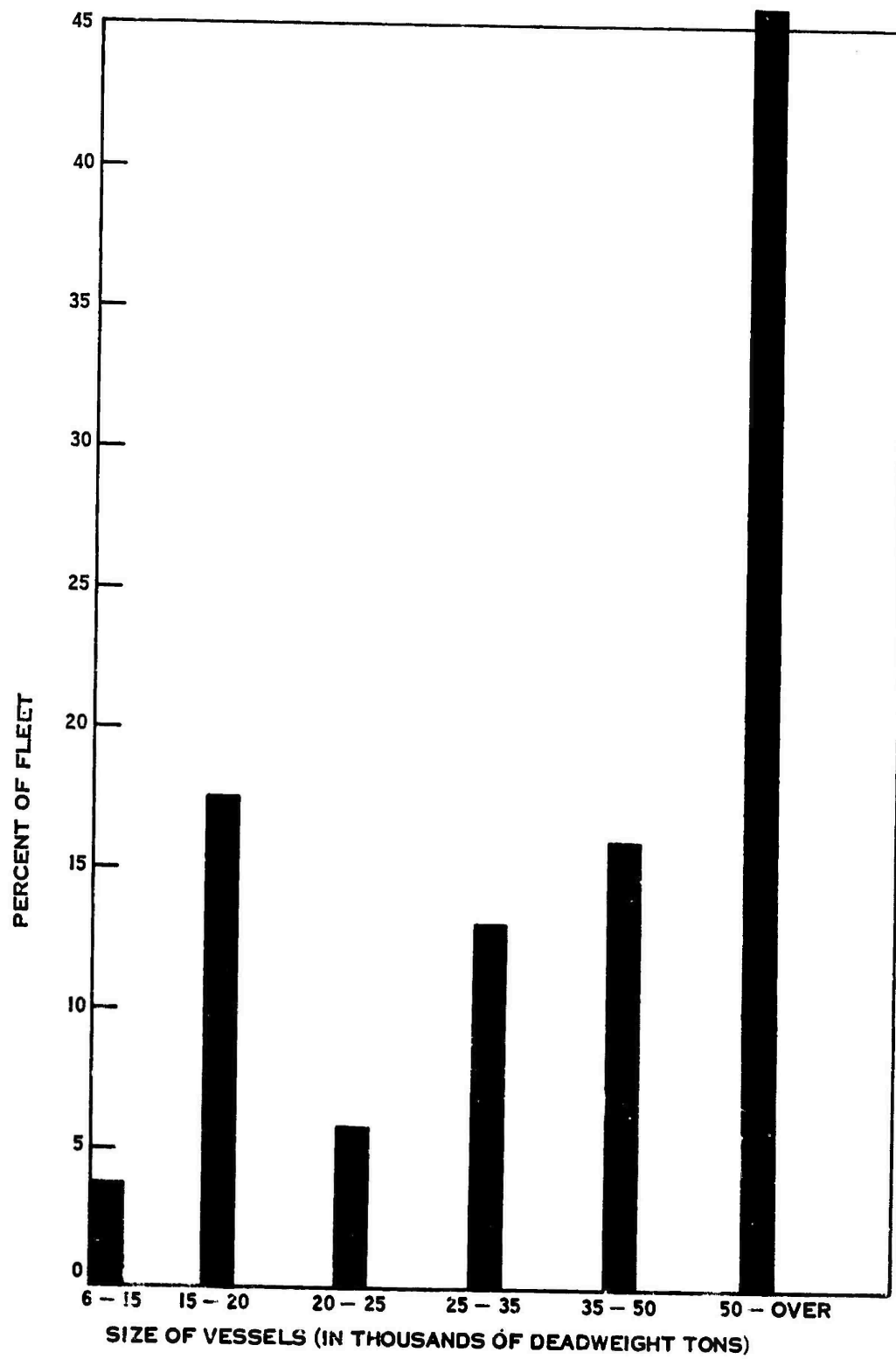


FIGURE 17. SIZE OF VESSELS IN WORLD TANKER FLEET

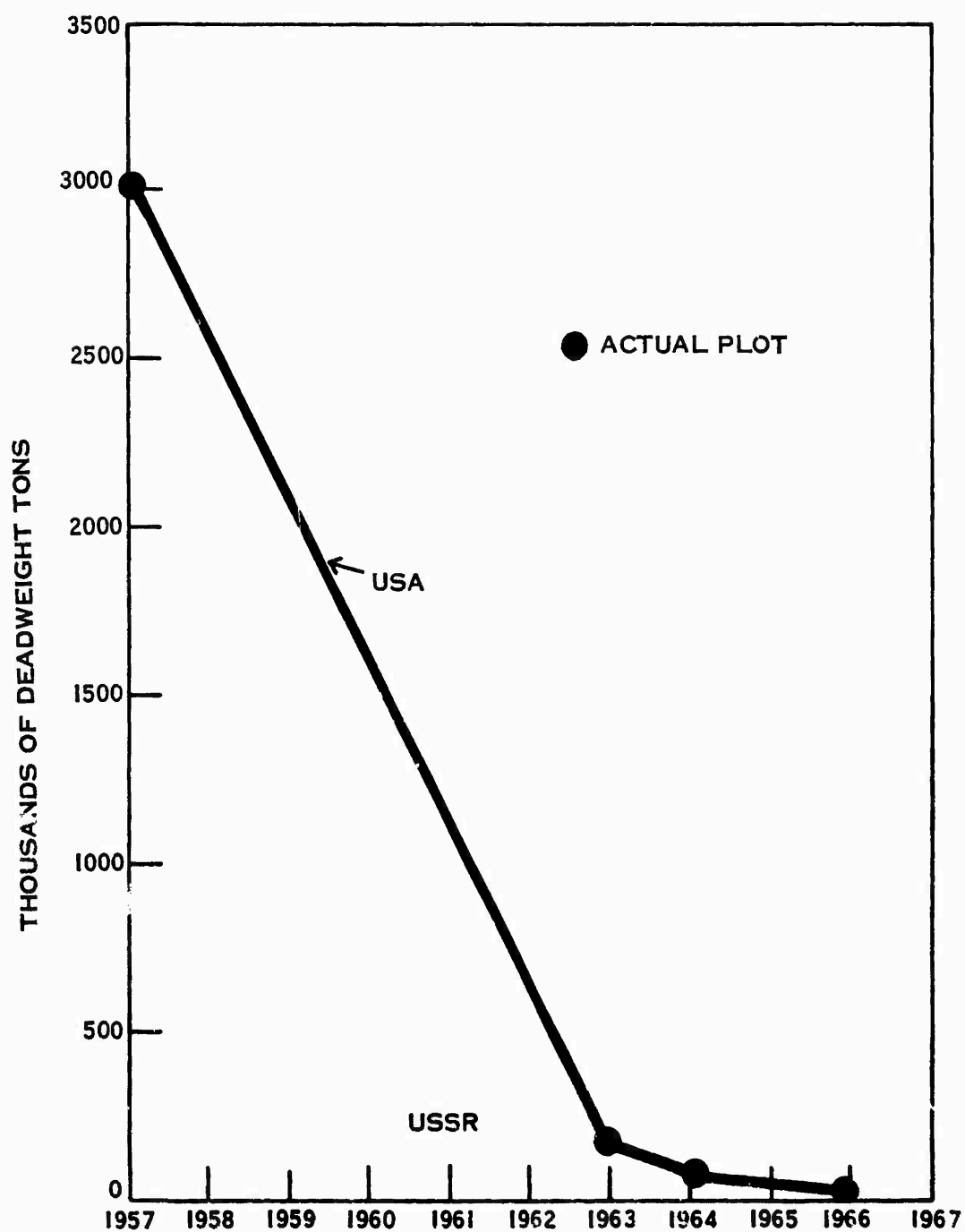


FIGURE 18. TOTAL TANKER CAPACITY ON ORDER OR UNDER CONSTRUCTION

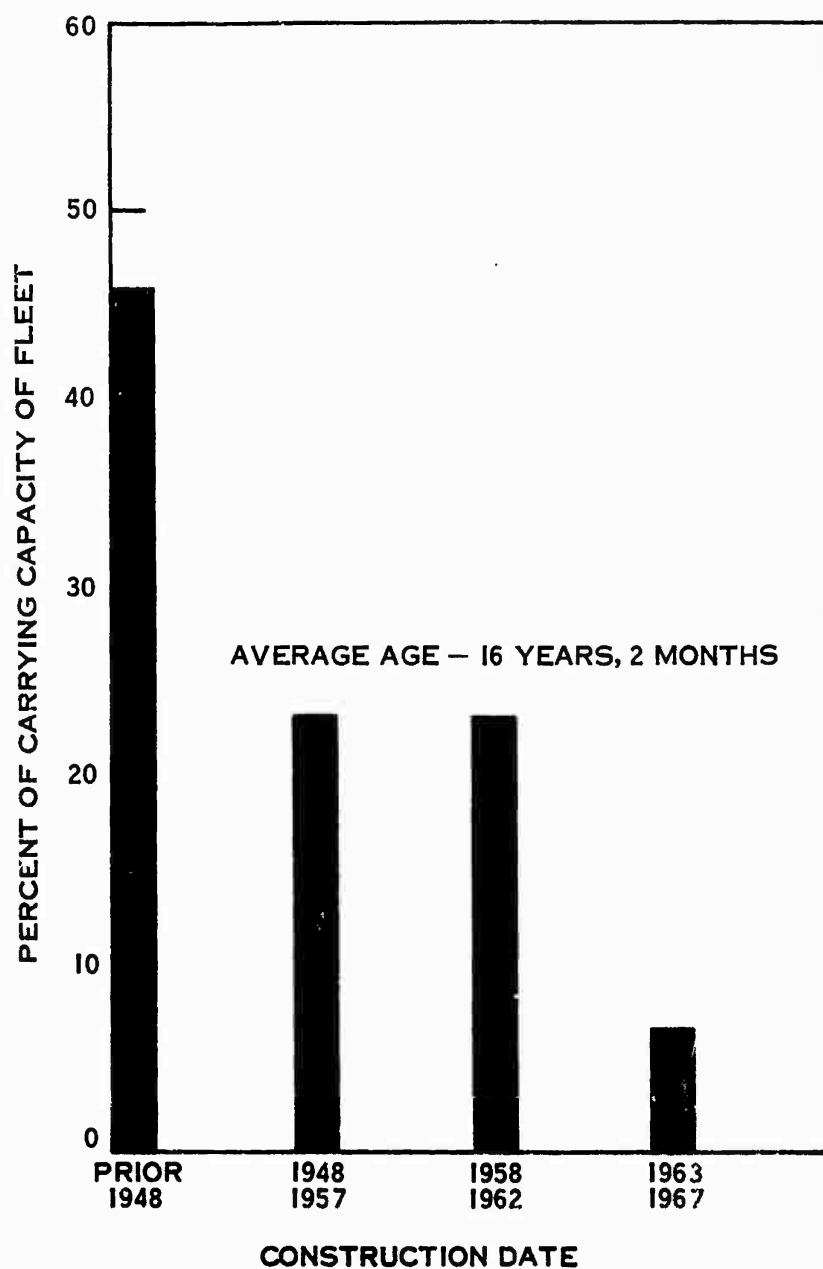


FIGURE 19. U.S. TANKER FLEET—WORLD'S OLDEST

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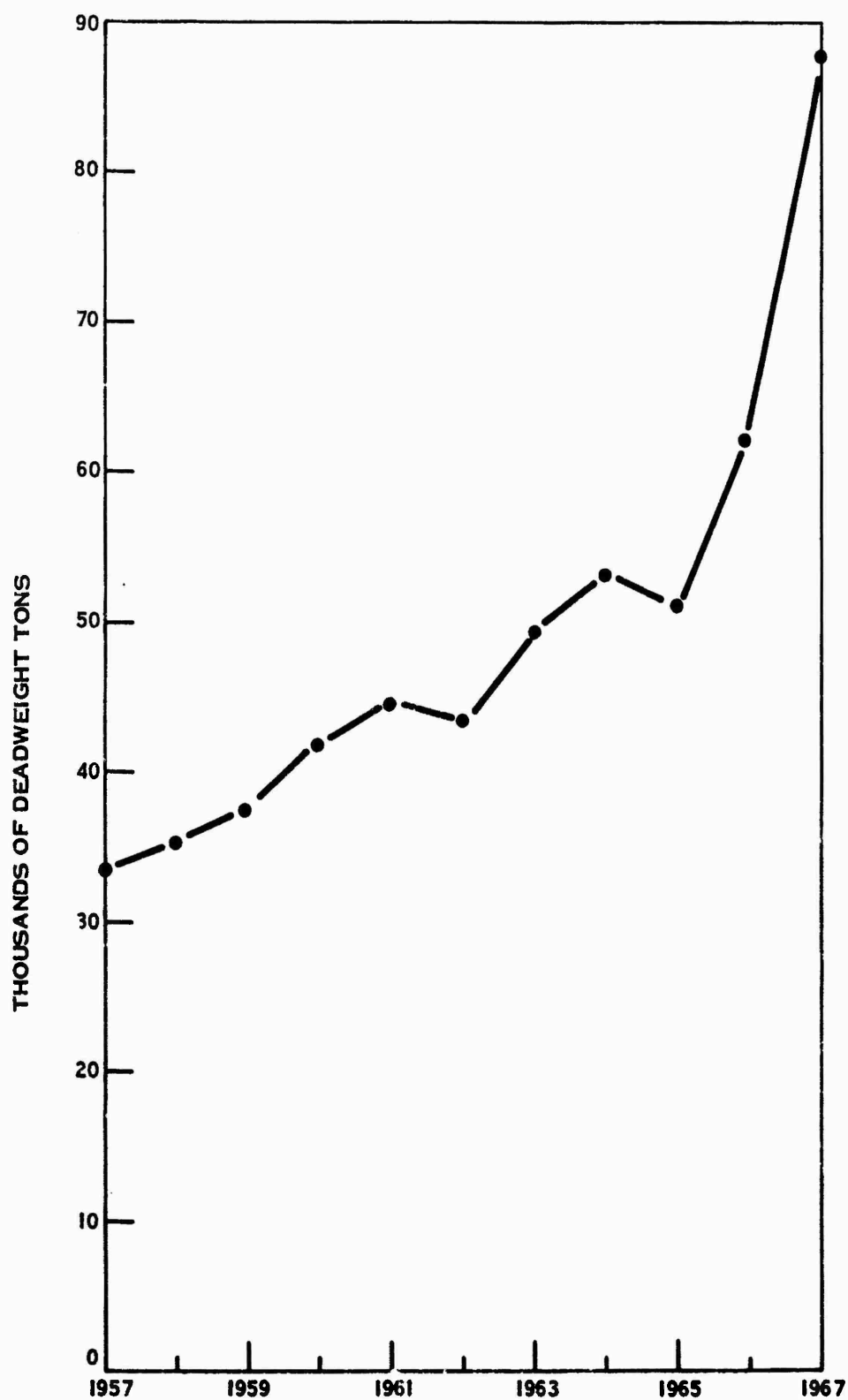


FIGURE 20. AVERAGE SIZE OF TANKERS ON ORDER OR UNDER CONSTRUCTION 1957-1967

4. UTILIZATION OF LARGE TANKERS

a. Commercial oil companies were primarily concerned with transporting one product—crude petroleum. When commercial consumption of refined petroleum products in an area is of sufficient magnitude to require extensive tanker transportation, a refinery is built, thus allowing the companies the use of large tankers to transport crude petroleum in significant quantities to the area. This pattern repeated itself in many areas such as in Seattle, Hawaii, the Philippines, Thailand, and Guam.

b. The Military are refined product users—the Army, primarily Automotive Gasoline (MOGAS) and Diesel Fuel Oil; the Navy, JP-5 and Navy Special Fuel Oil; and the Air Force, JP-4 and Aviation Gasoline (AVGAS). These products are delivered through nearly 100 ports serviced by tankers. Concentrating POL usage in fewer geographic areas would enhance the use of larger tankers for POL logistics and provide the most economical system. However, such concentration would degrade responsiveness and effectiveness as well as the advantage of dispersal.

c. To determine the economics of using large tankers for product support of the military ports, a staff study was made of 50 ports with the greatest POL usage.⁵ To ensure maximum transportation savings, the study assumed one port loading (seldom possible) and one port discharge on the longest hauls. To modify the ports at the least cost to accommodate large tankers, all were considered to have mud bottoms because mud bottoms were 10 times cheaper to dredge than rock bottoms. The cost of channel dredging was compared to the cost of installing a ship-to-shore line and the least expensive method was used. Extra tankage or pier facilities necessary were not included. It was found that the optimistic transportation savings would barely pay 4 percent interest on the understated cost of port improvements.

d. Some large tankers are economically utilized, but the numbers are limited. The conclusions reached from a study conducted by the Office of Assistant Secretary of Defense for Systems Analysis (OASD-SA) and Military Sea Transport Service (MSTS) operating experience were that approximately 32 handy-size (25,000 dwt) tankers were needed in the MSTS nucleus fleet.⁶ The rest of the MSTS tanker requirements could be fulfilled utilizing 39,000 to 70,000 dwt tankers. The OASD (SA) study recommended immediate replacement of 16 of the oldest T-2s with nine handy-size tankers (20,000 to 25,000 dwt).⁷ Although authority to proceed with the procurement of the nine handy-size tankers was obtained, the successful bidder could not arrange financing owing to the increasing prime interest rates. Acquisition through appropriated funds Ship Construction Navy (SCN) had not been successful. (For detailed discussion of handy-size tanker requirements see the Transportation Monograph.)

e. From October 1966 to February 1969, MSTS had to charter foreign-flag tankers to meet the increased demand for transportation of POL because of the unavailability of American-flag tankers for charter. Although American interests had tankers under flags of convenience, mainly Liberia and Panama, only a few of these were offered for charter to MSTS during this period.

⁵Office of the Chief of Naval Operations, Logistics Plans Division, Staff Study, subject: The Cost Effectiveness and Other Military Aspects of Large Tankers Versus Small Tankers, March 1965.

⁶Assistant Secretary of Defense for Systems Analysis, Draft Staff Study, An Analysis of Requirements for Ocean Transportation of Petroleum Products in Support of Department of Defense Forces (U), 22 May 1967 (SECRET); Assistant Secretary of Defense for Installations and Logistics, Memorandum, Ser. 00931, subject: Feasibility and Economics of Employment of Title XI Tankers by the Fleet and by MSTS (U), 6 August 1962 (SECRET).

⁷Assistant Secretary of Defense for Systems Analysis, Draft Staff Study, An Analysis of Requirements for Ocean Transportation of Petroleum Products in Support of Department of Defense Forces (U), 22 May 1967 (SECRET).

5. SMALL TANKERS

a. Small shallow-draft coastal tankers (2,000 to 3,500 dwt), although not addressed in tanker studies, are needed to support operations in undeveloped areas with limited water depths. They proved indispensable in the Vietnam conflict. The Military Sea Transportation Service's small T-1 tankers and the Navy AOGs are all old, the latter ranging from 24 to 27 years of age. Commercial T-1s are filling a specific civilian requirement and are seldom available for hire.

b. Although there were design improvements in the fleet oiler, with the jumboized oiler, the fast oiler/ammunition ship and the oiler/repair ship to update and replace the aging AO, little has been done to either update or replace the small AOG needed for support of amphibious assaults and coastal shallow-water distribution. One design that had been suggested by the Fuels Branch, Office of the Chief of Naval Operations, was a small tanker built on the 20-knot LST hull, capable of providing complete ship-to-shore support in a beach assault. The small tanker would have a maximum draft of 20 feet and a carrying capacity of 20,000 to 25,000 barrels, and carry ship-to-shore lines, mooring and fuel buoys, and 3 or 4 dracones of 2,000 barrels each. Method of operation for an assault would be to plant mooring buoys, discharge 6,000 barrels of product into dracones to get in beaching attitude, beach the tanker, anchor the pipeline or pipelines ashore, back off to the mooring buoy laying pipelines, place the fuel buoy, moor, connect up, and commence pumping to assault bulk fuel system. When the tanker was empty, it would go for another load, leaving the 6,000 barrels in the dracones for added support. This method of operation would put the complete ship-to-shore assault fueling system together in one unit. The tanker could be used in any subsequent support phase providing POL in any area of operations where water depths limited operations. However, the draft of this type tanker might have been too great for many of the more critical operations in Vietnam.

6. INSPECTION

a. Introduction. Inspection of POL has been divided into two interrelated segments: Government Procurement Quality Assurance and Quality Surveillance. These two interrelated segments were defined as follows:

(1) Government Procurement Quality Assurance. "The Government function by which the Government determines whether a contractor has fulfilled his contract obligations pertaining to the quality and quantity of petroleum products and related services."⁸

(2) Quality Surveillance. "The aggregate of measures used to determine and to maintain the quality of Government owned petroleum products to the degree that such products are suitable for intended use."⁹

b. Assignment of Responsibilities

(1) The Petroleum Procurement Inspection Manual provided procurement inspection procedures and stated, "In event of conflict between this manual and other Departmental instructions, provisions of this manual will govern."¹⁰ With regard to Procurement Inspection and acceptance, a joint instruction provides that: "DFSC, operating under DSA, will direct and control procurement inspection of all petroleum items worldwide utilizing established inspection services and facilities of the Military Departments."¹¹

⁸Department of Defense, DOD Instruction 4155.2, subject: Government Procurement Quality Assurance and Quality Surveillance of Petroleum, 27 February 1967.

⁹Ibid.

¹⁰Defense Supply Agency, Manual 4155.1, Petroleum Procurement Inspection, March 1965.

¹¹Defense Supply Agency, Manual 4220.1, Operating Procedures for Bulk Petroleum and Coal Products, December 1963.

(2) Quality Surveillance has been assigned to the Department having physical possession of the product.¹² "The military Departments shall provide laboratory facilities and/or services worldwide for petroleum products to support Government procurement quality assurance and quality surveillance."¹³

c. Personnel and Facilities. Each Service carried out quality surveillance to ensure that its fuel was satisfactory for use. The DSA directed and controlled procurement inspection throughout the world, using established inspection facilities of the military departments.

d. Assignment Overseas. Government Procurement Quality Assurance responsibilities were assigned to military departments on an area basis in order to obtain maximum benefits through the use of personnel and facilities in being for quality surveillance. An ASD (Manpower) memorandum of 20 March 1967 confirmed a Service-DSA policy that permitted job retention rights for those volunteering for overseas assignment regardless of department.¹⁴

e. Southeast Asia Experience

(1) Problems in Government Procurement Quality assurance developed during the Vietnam conflict because qualified military personnel were not available to fulfill the immediate needs, and civilian transfers were restricted to volunteers.

(2) As noted in Chapter IV, inspection personnel difficulties were encountered at Singapore. These difficulties stemmed from two factors: the contract was changed, requiring additional inspectors without advanced notification of this need, and immediate country clearance for the inspectors to enter Singapore could not be obtained.

(3) In Thailand, as in Vietnam, the extensive reliance on contractors posed inspector problems not normally or previously encountered. Pilferage was ingeniously performed and required new and continued measures to counteract.¹⁵

(4) Inconsistencies in the assignment of procurement Quality Assurance Representatives (QARs) occurred in several areas. In some instances, failure to assign the QAR to a local Service command resulted in some administrative and command difficulties. For example, in the Philippines the Navy QARs were centrally managed from Washington, and no local Service command was assigned the responsibility to ensure performance of duties, overtime, or other administrative services. In Thailand, limited common-support responsibility was vested in the Army with procurement inspection responsibilities being carried out by representatives of the Navy Fuel Supply Office which was located in Washington.

(5) In 1965, procurement inspection in Vietnam was a Navy responsibility. This responsibility was transferred to the Army in 1968. Whereas this transfer was logical for II, III and IV CTZ, it produced an anomalous situation in I CTZ where the Navy was responsible for POL support. The Naval Support Activity, Da Nang, carried out procurement inspection for the Army in addition to its own quality surveillance.

(6) The Defense Fuel Supply Center (DFSC) direction and control of procurement inspection and contract administration responsibilities were considered by DFSC to be fulfilled in Vietnam and Thailand when the Army and Air Force each designated a Property Administrator(s), and the Navy, by a joint directive, was responsible for procurement inspection and the

¹²Joint Service Regulation - Air Force Regulation No. 67-46, Army Regulation No. 700-36, BUSANDA Instruction No. 4730.1C, MCO P4760.1A, Quality Surveillance and Laboratory Facilities for Petroleum Products in Overseas Areas, 20 September 1965.

¹³Department of Defense, DOD Instruction 4155.2, subject: Government Procurement Quality Assurance and Quality Surveillance of Petroleum, 27 February 1967.

¹⁴Assistant Secretary of Defense for Manpower, Memorandum, subject: Job Retention Rights, 20 March 1967.

¹⁵Commander, Navy Support, Pacific, Da Nang, Project "ASAP" Newsletter, Second Edition.

functions of quality assurance. Consequently, the responsibilities between the military services, unified command representatives, and the DFSC for procurement administration were never clearly defined. This lack of a definition caused difficulties in accounting at the interface between the commercial contractor and the military services. (Chapters IV and V of this monograph have also presented the Contracting Officer's need for adequate representation in the field, and more clearly defined responsibilities when there is extensive use of in-country commercial service contracts.)

f. Continental United States Assignments. In DOD Directive 4105.59H, continental United States (CONUS) geographical areas are primarily assigned to the Defense Contract Administration Service for the performance of petroleum procurement inspection. To ensure coordinated resupply of strategic CONUS operations and redistribution of Pre-positioned War Reserve Stock (PWRS) in an emergency, certain contract-operated terminal storage areas, peculiar to the Department of the Air Force, utilized Air Force personnel for quality surveillance, property administration of Air Force product in possession of the contractor, and procurement quality assurance. This has permitted the efficient consolidation of quality surveillance and procurement quality assurance functions.

7. REVIEW OF MEMORANDUM BY THE JOINT LOGISTICS REVIEW BOARD

a. In a memorandum to the Chairman of the Joint Logistics Review Board dated 16 January 1970, the Assistant Secretary of Defense (Installations and Logistics), forwarded a Review of Audit Reports and Studies on the DOD Petroleum Program which contained certain information developed since the date of the DOD Petroleum Management Study Report of October 1968. That section of the Review pertaining only to Quality Assurance is dealt with here. The Review stated that:

"Procurement inspection and related QA services are provided by DCAS (Defense Contract Administration Services) (and Air Force) for the contiguous 48 states and Canada. The Army, Navy and Air Force provide these services in specifically assigned areas overseas including the States of Alaska and Hawaii. There are 280 inspectors: 198 DCAS, 43 Air Force, 22 Navy, and 17 Army.

"While current QA systems are generally satisfactory, there are areas that should be improved. Both in CONUS and overseas it is difficult to obtain people with the requisite skills to perform QA at petroleum production, transportation and storage facilities. Therefore we should attempt to ensure that we are utilizing personnel in the most efficient and effective manner. Significant problem areas are:

a. CONUS - Existing personnel resources for petroleum QA are not being used to best advantage. On 5 September 1965 the Assistant Secretary of Defense (I&L) directed the Defense Supply Agency to return to the Air Force the QA function and personnel associated therewith at a number of selected contract facilities handling Air Force-owned fuel. This directed action had the effect of weakening utilization of the manpower surrendered to the Air Force. The petroleum facilities, and the petroleum inspectors associated therewith, were reduced and widely scattered, especially on the east coast. Such condition significantly increases inspection costs and results in poor manpower utilization for DCAS. In representing their argument to the ASD (I&L), Air Force contended that inspection and quality control functions for AF-owned aircraft fuel should rest with the Air Force. They also contended that DCAS should not accept responsibility for the quality of this stored fuel since it is subject to loss through deterioration and contamination. It is important to note that this rationale was applied to only a select few facilities. Equally significant is the fact that DCAS previously performed inspection at all of these facilities to the apparent complete satisfaction of all concerned. Further, similar contract storage for Army and Navy is inspected by DCAS.

b. Overseas -

"(1) Inspection personnel shortages are apparent at certain overseas locations. Coverage in SEA has been inadequate throughout the entire period of

hostilities. Also coverage of facilities assigned to the Navy in the Middle East Area has been difficult and at present is not being provided at locations other than Bahrain and Ras Tanura.

"(2) Flexibility does not exist in the present split assigned pattern to the degree necessary to cope with significant workload shifts, leave for personnel and other changing conditions. Recent difficulties were experienced in handling increased workload in Singapore and Thailand.

"(3) Rotation problems are presented when civilian personnel of the services complete their overseas tour since the services no longer have a pool to draw from in CONUS for replacement purposes. Also placement of the returnee is a problem.

"(4) Current regulations provide that Defense Fuel Supply Center will designate the military service responsible for performing the quality assurance function in the various overseas areas. While DFSC seldom changes overseas area inspection assignments from one Department to another, such was considered appropriate recently in the case of Vietnam, Taiwan and Iceland. Administrative difficulties encountered in making these changes were disproportionately great. It took over six months of negotiating to shift responsibility in Vietnam from Navy to Army.

"(5) Overhead to supervise the procurement inspection function is duplicated in each of the three services. It, of course, already exists in DCAS.

"All of the above deficiencies would be minimized by the pooling of all petroleum quality assurance personnel under the management of a single agency. Since DSA (Defense Supply Agency) now has 70 percent of the petroleum QA personnel resources under its management, there should be early action to retrieve petroleum inspection at the 24 contract facilities now assigned to the Air Force, and to assign petroleum procurement inspection world-wide to a single agency, the Defense Contract Administration Services.

"In Europe (Army Audit Report A-715), Army auditors revealed that required QA inspections of packaged bulk petroleum products valued at about \$650,000 had not been performed. In addition, QA records were not accurately kept or properly used to control the QA program. Factors contributing to inadequate quality surveillance were as follows:

"(1) Most of the documentation relating to changes in quantities of stock on hand was not routed nor recorded properly.

"(2) Changes in shipments of product lots were frequently not reported.

"(3) Full use was not made of QA records to assure that in-storage testing was conducted at the required time intervals. As a result, tests were not requested when in-storage inspection intervals were reached.

"(4) Results of tests performed on products were frequently not received on a timely basis. Delays of up to 11 months occurred before test results were reported.

"(5) Many of the QA records had not been adjusted to show the correct on-hand stock balances according to the physical inventories, although there were numerous differences.

"(6) Since its establishment in June 1968, the QA function at Dahn has been performed as an additional duty by personnel whose primary duties are concerned with supply operations as opposed to quality control. . . . To an undeterminable extent, delayed staffing contributed to the weakness in QA. There would be a tendency, for example, to relegate the QA function to one of secondary importance to the immediate operational pressures of receiving and storing petroleum products and responding to the demands of customers."¹⁶

¹⁶ Assistant Secretary of Defense for Installations and Logistics, Memorandum to Chairman, Joint Logistics Review Board, subject: Management of Petroleum, 16 January 1970.

b. The following are the results of the JLRB review of section 7, Quality Assurance, of the attachment to the memorandum from the Assistant Secretary of Defense (Installations and Logistics), 16 January 1970.

(1) The information on quality assurance in the review was based on a memorandum from the Commander, DFSC, to the Director, DSA, dated 19 August 1969, in which the commander stated that the memorandum provided a brief portrayal of the petroleum procurement inspection system, his opinions as to its shortcomings and suggestions for improvement.

(2) CONUS. Quality surveillance is considered to be a proper function of the Air Force for aircraft fuel that it owns. Efficient use of personnel and facilities should be achieved by combining the DSA functions of quality assurance inspection with those of Air Force quality surveillance.

(3) Overseas

(a) As previously stated, inspection personnel shortages were experienced in Vietnam. Chapters IV and V of this monograph discuss the assigned responsibilities of Procurement Quality Assurance, Property Administration, and deficiencies in other aspects of contract administration.

(b) The only example identified in which Procurement Quality Assurance was not provided in the Middle East was for Aden. In this instance, U.S. citizens, including the diplomats, had been required to leave Aden. The DFSC request for an inspector stated that he should be a civilian or a military with a civilian passport in civilian clothes identified as a civilian. The Secretary of Defense refused permission for U.S. inspection in-country.

(c) The difficulties in obtaining personnel for handling the increased workload in Singapore were caused or aggravated by the fact that notification of the increased workload was transmitted to the Navy less than 10 days before the effective date of the contracts, and clearance for entry of the inspectors into Singapore was delayed in the State Department.

(d) Indications are that rotation problems were resolved by the DOD policy of job retention rights as stated in the ASD (Manpower) memorandum of 20 March 1967.¹⁷

(e) The administrative procedures and time required to change Procurement Quality Assurance assignments overseas was found to be as stated. It has been concluded in other parts of this monograph that the incongruities of locally fragmented assignments and administrative difficulties could be corrected by assigning the responsibilities for contract administration, property administration, procurement quality assurance, and financial accounting coincidentally with common-support assignments. With regard to the possible duplication of the procurement inspection in the three Services and DCAS, quality surveillance is considered to be necessary for each Service to ensure the maintenance of the quality of fuel to meet the needs of its operating forces. Laboratory facilities are shared, exchange agreements have been made to avoid duplication, and the Air Force and DCAS assignments have been made for the purpose of obtaining maximum use of personnel needed for the related functions of Quality Surveillance and Procurement Quality Assurance. The procurement inspection assignment overseas was made for the same purpose in order to eliminate the need for establishing the administrative functions of another agency overseas.

(4) In Europe (Army Audit Report A-715) - The term Quality Assurance (QA) is commonly used in reference to Procurement Quality Assurance. In the Army Audit Report the QA was used to mean quality surveillance a responsibility of the owning Service, and in this case a local command failed to carry out instructions already in existence for Service-owned stock in its possession.

¹⁷ Assistant Secretary of Defense for Manpower, Memorandum, subject: Job Retention Rights, 20 March 1967.

8. CONCLUSIONS AND RECOMMENDATIONS

a. Conclusions

(1) Standardization between the Services on equipment interfaces such as fittings and couplings was satisfactory (paragraph 2).

(2) Tri-Service meetings on POL equipment and/or systems, research and development, and standardization did enhance the exchange of information and did ensure that problem areas were considered at Department level (paragraph 2).

(3) The U.S. and world tanker fleet vessels are getting significantly larger. Although economical for long hauls, there are severe limitations to the use of these larger tankers in support of military operations as a result of the deep drafts and large quantities delivered by a single ship (paragraphs 3b, 3c, 3d, and 4).

(4) The need for an MSTN nucleus fleet of handy-size tankers (20,000 to 25,000 dwt) has been recognized, but neither long-term charters nor appropriated ship construction have yet provided the means of fulfilling this deficiency (paragraph 4c). (See recommendation in Transportation Monograph.)

(5) New, small tankers are required to replace the old, shallow-draft T-1s and Navy AOGs (paragraphs 5a and 5b).

(6) Extensive use of separate nonmilitary-controlled commercial facilities and equipment made POL inspection in Southeast Asia difficult (paragraph 6e).

(7) As previously noted in Chapter V, there was insufficient direction and control of procurement administration in Vietnam and Thailand largely because the Defense Supply Agency understood it was enjoined from having adequate field representation in overseas areas (paragraph 6e).

(8) There was a shortage of qualified civilian petroleum procurement inspectors who volunteered for overseas duty in hostile locations and of military personnel qualified for those duties (paragraphs 6e and 7b).

(9) No problems were identified in quality surveillance assignments of the Services (paragraphs 6e and 7b).

(10) In some cases the assignment of procurement quality assurance responsibilities was not consistent with the assignment of responsibilities for providing other logistic support (paragraphs 6e and 7b).

(11) The assignment of Procurement Quality Assurance to the Air Force in the continental United States at certain key contract operated storage, peculiar to that Department, has permitted efficient consolidation of Procurement Quality Assurance and Quality Surveillance assignments (paragraph 7b).

b. Recommendations. The Board recommends that:

(PL-15) Services maintain a nuclei of qualified junior officers and senior non-commissioned officers with billets to maintain POL procurement inspection proficiency for responding to shifting workloads and for assignment in undesirable or hostile areas (conclusion (8)).

(PL-16) Joint Directive DSAM 4220.1, AR 700-9100.5, AFR 67-142C, MCO 10340.16A, and NAVSUP PUB 5005 include, in the inspection assignment policy section, a statement indicating that to the extent practicable Procurement Quality Assurance inspection should be assigned so as to coincide with other logistic responsibilities (conclusion (10)).

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(PL-17) The handy-size tanker program be implemented as soon as practicable (conclusions (3) and (4)).

(PL-18) A program to replace the old T-1 tankers and AOGs be implemented (conclusion (5)).

CHAPTER VII
REVIEW OF REPORT OF THE PETROLEUM MANAGEMENT
STUDY GROUP FOR THE DEPARTMENT OF DEFENSE
DATED OCTOBER 1968

CHAPTER VII

REVIEW OF REPORT OF THE PETROLEUM MANAGEMENT STUDY GROUP FOR THE DEPARTMENT OF DEFENSE DATED OCTOBER 1968

1. INTRODUCTION. In his memorandum of 8 May 1969, the Secretary of Defense referred to the Joint Logistics Review Board (JLRB) for further study and evaluation four recommendations of the Department of Defense (DOD) Petroleum Management Study 1968 which had received general nonconcurrences. These recommendations are discussed below together with the conclusions and recommendations of the JLRB.

2. RECOMMENDATION 1. "That a single DOD agency (Defense Fuel Supply Center) [DFSC] be given full and sole authority for source selection and placing orders on contracts, with power of delegation as desirable, including the issuance of such distribution plans as necessary."¹

a. Discussion. The only substantive issues regarding source selection and ordering that the Joint Logistics Review Board has been able to identify have been those pertaining to the Services' ordering arrangements in connection with free on board (FOB) origin contracts requiring delivery by ocean tankers. These contracts, written by DFSC, are mostly unfunded and open-end contracts. They provide the estimated quantities necessary to meet the projected needs of the Services. Actual quantities to be drawn from these contracts are not established until orders are placed. Nevertheless, these contracts do prescribe rates of delivery (daily or monthly) that should not be exceeded. It is necessary that ordering procedures for products keep these rates, tanker availability, receiving capability, needs, and other related factors in harmony. These interrelationships concern the Services as well as DFSC.

(1) Special coordination is required when products are picked up from a contractor and delivered by Military Sea Transport Service (MSTS) or MSTS-chartered tanker. In the case of the Army and the Navy, the projected requirements, including those included on the slates of the unified commands, are submitted to DFSC. The latter uses the projected requirements to establish and update a schedule as a basis for MSTS which make tankers available for the necessary deliveries. As the dates for picking up the cargoes approach, the Army and Navy place orders via DFSC, citing the necessary funds. DFSC selects the source, in case there is more than one contractor in the pickup area, and places the order on the contractor.

(2) Air Force-projected requirements are also furnished to DFSC in the form of slates. These slates are incorporated into DFSC's schedule along with the requirements of the other Services. However, unlike the other military departments, sources for U.S. Air Force requirements for tanker liftings from FOB-origin contracts are initially recommended by the Directorate of Air Force Aerospace Fuels to DFSC and are considered acceptable unless DFSC advises San Antonio Air Materiel Area of a substitute selection. If deemed to be in the best interest of the Government, DFSC may disapprove the San Antonio Air Materiel Area recommendation and advise San Antonio Air Materiel Area the reasons for change of source.² The order is then placed directly on the contractor by the Air Force rather than via DFSC as in the case of the Army and Navy.

¹Secretary of Defense, Memorandum, subject: Management of Petroleum, 8 May 1969.

²Defense Supply Agency, Manual 4220.1, Operating Procedures for Bulk Petroleum and Coal Products, paragraph 3.3.2d, December 1963.

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b. Source Selection. DOD Directive 4140.25, Management of Petroleum Products, 6 January 1965, assigned to the Defense Supply Agency the authority to "select source and means of transportation to meet resupply requirements of bulk petroleum involving tanker movements."

(1) The above authority agreed with previously established procedures and authorities established by a memorandum issued by the Office of the Assistant Secretary of Defense for Supply and Logistics (OASD(S&L)), entitled Improvement of Petroleum Supply Management Within the DOD, 30 December 1959. In 1960 each Service entered into an agreement with the DFSC (formerly the Military Petroleum Supply Agency) which outlined the responsibilities necessary to implement the assignments in the 30 December 1959 memorandum. The DFSC and the Services have operated under the provisions of those agreements since 1960. The procedures and authorities established by the Office of the Assistant Secretary of Defense for Supply and Logistics in 1959 were still recognized, and stated as being the basis for source selection in the Joint Defense Supply Agency and Service Directive DSAM 4220.1/AR 700-9100-5/AFR 67-142/MCO 1034.16 and NAVSUP PUB 5005, Operating Procedures for Bulk Petroleum and Coal Products, December 1963 (DSAM 4220.1) and subsequent changes. This same authority was used by the DFSC and the Services in the December 1969 issue of this joint directive.

(2) The source selection authority is exercised by the DFSC through one or more of the following actions when:

- (a) Contract awards are made by the DFSC.
- (b) DFSC selects lift points and orders products for the Army and Navy.
- (c) The recommended source of Air Force tanker liftings is either accepted or rejected by the DFSC.

c. Ordering. Ordering is the process of formally requesting, from existing contracts, that a product be made available for movement from or pickup at the source, or for the delivery by the contractor to a specific destination. Ordering activities are responsible for ordering quantities to maintain war reserve and operational stock levels, and to meet the operational needs of the user.

(1) The Defense Fuel Supply Center of the Defense Supply Agency contracts with the petroleum industry, normally for a 6-month period, to meet the estimated requirements of the military departments. The majority of these contracts are unfunded contracts in which Service funds are obligated at the time of ordering. With the exception of FOB-origin products picked up by MSTs or MSTs-charter tanker, the military departments normally place their orders on the contractor directly. In many cases this ordering authority is delegated to activities within each Service. These activities place orders, within authorized limits, to meet operational needs and the requirements of war reserve and operating stocks. Direct ordering ensures a maximum of responsiveness to the needs of the Service and the elimination of unnecessary steps in the ordering process. Examples of such delegations within the Services follow:

(a) All Services. Resupply requirements for posts, camps, and stations that are not moved through a depot or Petal Distribution Station are normally ordered by the using activity.

(b) Army. The Army has not delegated ordering authority, other than stated in paragraph 2c(1)(a), below the Inventory Control Point (ICP) level.

(c) Navy

1. The Naval Fuel Depots at San Pedro and Oakland support the Pacific Fleet and Navy and Marine activities within their areas of responsibility.

2. U.S. Naval Support Force, Antarctica, orders products for its own use.

3. Commander, Fleet Air, Mediterranean, places orders primarily for support of the Sixth Fleet.

4. Commanding Officers of fleet oilers of the underway replenishment forces order products for their own consumption and that which they deliver to the fleet.

(d) Air Force. Air Force field offices place orders for all tanker-barge liftings that originate in their area, and for the resupply of Retail Distribution Stations by all modes.

(2) Some orders are placed by the individual units, such as by a commanding officer of a Navy ship requiring bunkering or by a pilot requiring an into-plane delivery. When there is no contract source in the area, the delivery may be obtained by direct purchase.

(3) All of the deliveries by barge, pipeline, tank car, and tank truck are the result of orders placed directly by the Services. Table 5 depicts by mode the percent of ordering actions accomplished by the Services and DFSC.

(4) The responsibilities for source selection, scheduling, and ordering of products for movement by tanker are divided between DFSC and the Services and are summarized in Table 6.

(5) At times it was necessary to load on a single tanker products that may have been ordered by more than one activity. In most cases only the Air Force and the DFSC were involved, and each would order that portion of the cargo for which it was responsible. Of the 202 cargoes ordered by the Air Force during the period July through December 1969, 67 were split (48 of these cargoes were loaded in the same port area and 19 were loaded at separate port areas). Generally, when split cargoes were established for overseas destinations the cargoes involved more than one product. However, in the case of CONUS shuttle movements, which occurred mainly on the East Coast, a single product may be ordered by two activities, i.e., Navy 115/145 AVGAS for Key West, Florida, and Air Force 115/145 AVGAS for Port Everglades, Florida. With the AVGAS and jet fuel contracts in existence in January 1970, the Air Force and the DFSC had tanker allocations on the same contract in nine instances. (Product allocation on those contracts were: AVGAS—85 percent Air Force and 15 percent DFSC; and JP-4—92 percent Air Force and 8 percent DFSC. The quantity of product allocated to tanker liftings from those nine contracts expressed in 120,000-barrel tanker loads equaled 17 for DFSC and 241 for the Air Force.)

(6) As of January 1970 there were nine contracts on which both the DFSC and Air Force placed orders. If all tanker orders were placed through DFSC and not delegated to the Air Force, the number would increase to 14. This is due to the fact that the Air Force would still have barge, pipeline, tank car, or tank truck allocations on seven of these contracts plus seven other contracts that the DFSC did not originally have a tanker allocation on but would acquire such with the transfer.

(7) The Air Force estimates that approximately 2.75 man-years of the ICP time was utilized for tanker ordering. No estimate was provided on the amount of time that was spent by Air Force contract monitoring points in this function. The DFSC utilizes 2 man-years for their portion of tanker ordering. During the period July to December 1969 the DFSC ordered 141 clean cargoes, and the Air Force ordered 324 clean cargoes. No decision was reached pertaining to personnel savings to be realized if all tanker ordering would be assigned to the DFSC.

TABLE 5
PERCENT OF ORDERING ACTIONS ACCOMPLISHED BY THE SERVICES AND DFSC
(By Mode)

<u>Requiring Service</u>	<u>Tanker and Lake Tankers*</u>	<u>Barge</u>	<u>Pipeline</u>	<u>Tank Car</u>	<u>Tank Truck</u>	<u>Post, Station & Base Bulletin Contracts</u>
Army	39% Army 61% DFSC	100% Army	100% Army	100% Army	100% Army	100% Army
Navy	15% Navy 85% DFSC	100% Navy	100% Navy	100% Navy	100% Navy	100% Navy
Air Force	100% Air Force	100% Air Force	100% Air Force	100% Air Force	100% Air Force	100% Air Force

*The Air Force is the only activity that utilizes lake tankers.

TABLE 6
RESPONSIBILITIES FOR SOURCE SELECTION, SCHEDULING, AND ORDERING

Service	Product Source	Product Destination	FOB Origin			FOB Destination		
			Schedules	Selects Source	Orders	Schedules	Selects Source	Orders
Army	All	MAP	DFSC	DFSC	APC	APC	APC	APC
	All	Other	DFSC	DFSC	DFSC	APC	APC	APC
Navy	West Coast	All	DFSC	DFSC	NFD	NFD	NFD	NFD (1)
	Except West Coast	All Except Mediterranean	DFSC	DFSC	DFSC	DFSC	DFSC	DFSC
	Except West Coast	Naples Mediterranean	DFSC	DFSC	DFSC	NAV-MED.	NAV-MED.	NAV-MED. (2)
Air Force	CONUS	All	DFSC	AFAFFO	AFAFFO	AFAFFO	AFAFFO	AFAFFO (3)
	Overseas	All	DFSC	DET. 29	DET. 29	DET. 29	DET. 29	DET. 29

(1): NFD: Navy Fuel Depot, San Pedro; Navy Fuel Depot, Oakland.
(2): NAV-MED: Commander, Fleet Air, Mediterranean (Sub-delegated to Joint Area Petroleum Office, Naples).
(3): AFAFFO: Five Air Force Aerospace Fuels Field Offices located in CONUS.
Source: Report of the Petroleum Management Study for the DOD, October 1968, p. 11-11.

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(8) As a result of the fact that the DFSC awards contracts on the basis of least laid-down cost to the user, a single contract may provide for:

- (a) The supply of more than one product
- (b) Multiple sources for one or more products
- (c) Delivery of product(s) by multiple modes
- (d) Products required by one or more Services in addition to other governmental and authorized customers
- (e) The supply of products from one source to satisfy the needs of customers at widely dispersed locations which may involve second and third destination movements after receipt by the using or servicing activity.

(9) No difficulties were discovered as a result of competition between military departments for a single product. Table 7 indicates the percentage of each product purchased for each military department in 1969.

TABLE 7

PERCENT OF SELECTED PRODUCTS PURCHASED FOR EACH SERVICE,
Fiscal Year 1969

<u>Product</u>	<u>Army</u>	<u>Navy</u>	<u>Air Force</u>
AVGAS	2.3	17.7	80.0
JP-4	0.6	4.1	95.3
JP-5	Nil	98.9	1.1
DFM	71.6	26.5	1.9
MOGAS	95.3	3.0	1.7
NFSO	3.9	96.1	Nil

Source: Defense Supply Agency, Defense Fuel Supply Center, Summary of Procurement Statistics FY 69.

(10) The assignment of interservice support responsibilities for bulk petroleum in overseas areas as outlined in Table 8 takes into account the dominant user.

d. Distribution Plans. The Air Force is the only military department to use Distribution Plans (DPs). These plans are used to facilitate and manage the operational coordination necessary for the complex CONUS distribution requirements from refineries and Retail Distribution Stations to supported Air Force bases. The DP system is compatible with the inventory and capital control procedures used by the Air Force.

(1) Procurement awards by DFSC are made on the basis of lowest delivered costs. Frequently a single item on a contract will provide a product that was purchased for many activities which are not listed on the contract. In order to allocate to the field offices and the overseas contract monitoring points their share of fuel on the contract, the Air Force ICP reviews the schedule of new contracts to determine quantities allocated to the Air Force, the modes specified, and the FOB points established. The Air Force ICP then compares this information to the DFSC contract work sheets and the Buyers Guide. When these actions are

completed, the ICP issues Distribution Plan Authorizations (DPAs) for the full contract period to the concerned field offices and contract monitoring points, indicating the amount of product allocated and the appropriation symbol to be cited.

TABLE 8

BULK PETROLEUM INTERSERVICE SUPPLY SUPPORT TO OVERSEAS AREAS

(For shipment into overseas areas or lifted from local commercial distribution facilities)

	<u>AVGAS</u>	<u>JP-4</u>	<u>JP-5</u>	<u>MOGAS</u>	<u>KERO</u>	<u>DIESEL</u>	<u>NAV SPEC</u>	<u>LUBES</u>	<u>AV LUBES</u>
<u>CINICAL</u>									
Aleutians -----	AF	AF	N	A		N	N		
Mainland -----	AF	AF	N	A	A	A	N		
<u>USCINCSO</u>									
Panama -----	AF	AF	N	A	A	N	N		
S. America -----	AF	AF	N	A	A	N	N		
C. America -----	AF	AF	N	A	A	N	N		
<u>USCINCEUR</u>									
<u>CINCUSAREUR</u>									
Benelux -----	AF	AF	N	A	A	A	N		
France -----	AF	AF	N	A	A	A	N		
Germany -----	AF	AF	N	A	A	A	N		
England -----	AF	AF	N	AF		AF	N		
*Scotland -----	AF		N			N	N		
Denmark -----	AF	AF	N	AF		N	N		
Norway -----	AF	AF	N	AF		N	N		
Sweden -----	AF	AF	N	AF		N	N		
<u>CINCUSNAVEUR</u>									
Spain -----	AF	AF	N	AF	AF	N	N		
Tunisia -----	AF	AF	N	AF	AF	N	N		
Northern Italy ¹ ---	AF	AF	N	A	A	A	N		
Southern Italy ---	AF	AF	N	N	N	N	N		
Algeria -----	AF	AF	N	AF	AF	N	N		
Turkey -----	AF	AF	N	AF	AF	AF	N		
Crete -----	N	N	N	N	N	N	N		
Greece -----	AF	AF	N	AF	AF	N	N		
Libya -----	AF	AF	N	AF	AF	N	N		
*Morocco -----	N	N	N	N	N	N	N		
<u>CINCLANT</u>									
Antilles -----	N	AF	N	A		N	N		
Azores -----	AF	AF	N	AF	AF	AF			
Ascension Island -	AF	AF	N	AF	AF	AF			
Bahamas -----	AF	AF	N	AF	AF	AF			
Bermuda -----	AF	AF	N	N		N	N		
Cuba -----	N	N	N	N		N	N		
Iceland -----	N	N	N	N	N	N	N		
*Argentina, Nfld --	N	N	N	N	N	N	N		
Vieques -----	N	N	N	N	N	N	N		

TABLE 8 (Continued)

	<u>AVGAS</u>	<u>JP-4</u>	<u>JP-5</u>	<u>MOGAS</u>	<u>KERO</u>	<u>DIESEL</u>	<u>NAV SPEC</u>	<u>LUBES</u>	<u>AV LUBES</u>
<u>CINCPAC</u>									
Hawaii ² -----	AF	AF	N	N	N	N	N	N	
Japan -----	AF	AF	N	A	A	A	N		
Korea -----	AF	AF	N	A	A	A	N		
Marianas -----	AF	AF	N	N	N	N	N		
Philippines -----	AF	AF	N	N	N	N	N		
Ryukyus -----	AF	AF	N	A	A	A	N		
Taiwan -----	AF	AF	N	A	A	A	N		
Cambodia -----	AF	AF	N	A	A	A	N		
Laos -----	AF	AF	N	A	A	A	N		
Thailand -----	AF	AF	N	A	A	A	N		
Vietnam -----	AF	AF	N	A	A	A	N		
Burma -----	AF	AF	N	A	A	A	N		
<u>CINCSRIKE</u>									
Africa ³ -----	AF	AF	N	A	A	A	N		
Dhahran -----	AF	AF	N	A	A	A	N		
India -----	AF	AF	N	A	A	A	N		
Pakistan -----	AF	AF	N	A	A	A	N		
Ceylon -----	AF	AF	N	A	A	A	N		
<u>SAAMA</u>									
Greenland -----	AF	AF	N	AF	AF	AF	N		
Newfoundland ---	AF	AF	N	AF	AF	AF	N		
Canada -----	AF	AF	N	AF	AF	AF			

1. North of 42d parallel

A = Army

2. Includes Johnston, Wake & Midway Islands, Eniwetok & Kwajalein

AF = Air Force

3. Except Algeria, Libya, Morocco, and Tunisia

N = Navy

* Does not include Air Program

Source: Defense Supply Agency, Manual 4220.1, Operating Procedures for Bulk Petroleum and Coal Products, December 1963.

(2) Upon receipt of the DPA and the contract, the field offices and contract monitoring points accomplish the same actions for each activity that they support and issue Distribution Plans (DPs) accordingly, taking into account anticipated peacetime operating requirements and war reserve level requirements of each activity.

(3) This further allocation of contractual assets is considered necessary by the Air Force, since frequently a single source or redistribution station within an area supports several local activities as well as offshore installations. The result is a well-defined petroleum, oil and lubricants (POL) operational distribution plan which allocates to each activity the maximum quantity of product that it is authorized to draw from the contract for the forthcoming quarter. The DPs are issued to using activities, suppliers, quality surveillance personnel, and retail distribution stations. These plans provide in simple terms, on one or two pages, all the information required for resupply by the using activities. This method of providing such information is effective and eliminates the need for providing complete (20 pages or larger) contracts to all using activities. The Field Offices then monitor compliance with the DP allocations by

review of various monthly reports. The projected needs for inland, barge, and tanker movements determine the lift points to be nominated by the field offices for future tanker cargoes.

e. Coordination of Ocean Tanker Scheduling

(1) Under a recently established procedure, representatives of DFSC, MSTS, and ICPs meet once a month after the monthly slates are received from the unified commands and ICPs. They meet to broadly review the slates and discuss any unusual aspects about them and the implications if any. Any other problems in connection with ocean-tanker scheduling may also be brought up at this time. The DFSC prepares and distributes minutes of these meetings.

(2) The monthly meeting is not intended to be used for routine review of tanker schedules. This kind of meeting became unnecessary when the daily tanker lift schedule was instituted. Now the routine review is facilitated by publication by DFSC and distribution to all concerned of a computer printout of the daily tanker lift schedule which contains all pertinent information. Daily updating by DFSC is facilitated by location of the ICPs adjacent to DFSC in the same building at Cameron Station. Under this arrangement, the ICP representatives can discuss and resolve with DFSC any routine problems related to tanker scheduling. Input thus developed for updating the tanker schedule can immediately be entered into the computer in DFSC for printout and distribution the morning of the following day.

(3) In addition to the day-to-day contacts and the formal monthly meetings, there is a detailed weekly review and discussion of the entire tanker schedule. This review is done by way of a weekly briefing to the Commander of DFSC. The ICP representatives attend the briefings and are encouraged to bring up for discussion any problems that they have in the area of tanker scheduling.

(4) The DFSC and the ICPs are satisfied with the procedure that has been established.

3. CONCLUSIONS AND RECOMMENDATIONS

a. Conclusions

(1) The established procedures for direct ordering of bulk petroleum by the military departments and the delegation of such authority to appropriate commands within these Departments ensure a maximum of responsiveness to operational needs and a minimum of steps in the ordering process (paragraphs 2c(1), 2c(2), and 2c(3)).

(2) The Defense Supply Agency-Defense Fuel Supply Center is responsible for arranging with MSTS schedules for the nucleus fleet and MSTS-chartered tankers, and for the selection of the source and means of transportation to meet resupply requirements for bulk petroleum involving tanker movements (paragraphs 2b(1) and 2b(2)).

(3) Coordination of such movements and relationships with contractors would be simplified by the Air Force adopting the procedures used by the Army and Navy, ordering through the Defense Fuel Supply Center in the case of deliveries involving shipments by ocean tankers. Such adoption need not degrade responsiveness to the requirements of the Air Force and would facilitate transition to the controls which might be required in case of a war at sea, such as encountered in World War II (paragraphs 2c(5); 2c(6); 2c(7); and 2c(8)).

(4) In some cases, it is desirable to delegate to a military department limited authority to place orders involving tanker shipments (paragraphs 2c(8) and 2c(9)).

(5) The procedure that is being followed in tanker coordinating and scheduling is satisfactory. Moreover, the tanker lift report would be further improved and more complete if the Defense Fuel Supply Center implements the recommendation contained in Recommendation (PL-4) of Chapter IV in this monograph to include commercial tanker deliveries of

Government-owned products to commercial terminals in Saigon (Nhabe) and Bangkok (Chong Nonsri) in the tanker lift reports (paragraph 2e).

(6) The issuance of distribution plans is consistent with the responsibilities of the Secretary of the Air Force for the support of forces of that Department (paragraph 2d).

b. Recommendations. The Board recommends that:

(PL-19) A single DOD agency (Defense Supply Agency/Defense Fuel Supply Center) be given full and sole authority for source selection and placing orders for large shipments of petroleum products to be moved by ocean-going tankers, except tankers operating on the Great Lakes, to meet the requirements of the military departments. The authority may be delegated by the Defense Supply Agency (conclusions (3) and (4)).

(PL-20) Except where ocean-going tanker shipments are involved, military departments retain the authority for source selection and ordering, and for the delegation of such authority as appropriate (conclusions (1) and (4)).

(PL-21) There be no changes in the authority of a military department to issue its own distribution plans (conclusion (6)).

4. RECOMMENDATION 2. "That if any other form of management short of fully integrated management (Option 4) is selected, a 'management fund' be authorized for the Defense Supply Agency to finance funded contracts, to fund orders placed by that agency and to fund first destination transportation for orders placed. That if Option 4 is selected, a Defense Fuels Stock Fund Division for bulk fuels be established with 'projects' corresponding to the present departmental stock fund division or 'material categories' for bulk fuels, to finance from time of order to issue to end-use or authorized customer."³

a. Management Fund. The first purpose of the management fund, as set forth in the above recommendation is to finance funded contracts. The majority of the funded contracts are for packaged products which are subject to being purchased for depot stocks. (These funded contracts represent approximately 5 percent of all petroleum contracts.) They are automatically eliminated from purchase through a management fund in that amendments in Public Law 87-651, Section 2209, prohibit the use of a management fund for the purchases of material for stock. Furthermore, the management of packaged petroleum products was excluded from the DOD Petroleum Study Group Report.

(1) In recent years, the only funded contracts for bulk petroleum appear to have been those in which amortization of a contractor's investment in plant or storage, in the interest of the Government, has been involved. This includes the large Caltex Arabian Gulf Evergreen Contract, in which investment costs, special considerations, and commitments were originally involved. Using transfers from the military departments, the Defense Supply Agency/Defense Fuel Supply Center cites annual funds sufficient for 90 percent of the contract quantity. Quantities above this amount are ordered and payments made as for unfunded contracts.

(2) The other two purposes of the management fund, as set forth in the recommendation, were to fund orders placed by the Defense Supply Agency and to fund first-destination transportation for orders placed. At present the Army and the Navy cite funds for product purchase and first-destination transportation charges at the time orders are placed by the DFSC. If the Air Force followed the same procedures, there would appear to be no advantages to such a fund, but there would be several disadvantages. Under the ordering arrangement for Air Force tanker cargoes recommended in paragraph 3b, the Air Force would provide the DFSC with a Distribution Plan Authorization for the contracts involved which would provide the authority for fund obligation under the inventory and capital control procedures used by the Air Force.

³Secretary of Defense, Memorandum, subject: Management of Petroleum, 8 May 1969.

(3) Under the management fund concept, the existing service stock funds and attendant accounting and financial activities would remain.

(4) DOD Directive 7460.1, Establishment of Defense Agencies Management Fund, 13 December 1961, was quoted as an authority under which such a fund may be established. That directive also requires that the financing of projects under a management fund would be made from supporting appropriations. This action would require the Services to make cash or obligating authority available to the DFSC sometime prior to its obligation on a purchase order. Therefore, additional cash would be required since the corpus for the management fund of each Service is limited by law to \$1 million each.

(5) The authority cited in DOD Directive 7460.1 (10 U.S.C. 2209 and 126) requires that amounts advanced to management funds are available for obligation only during the fiscal year in which they are advanced. Considerable difficulties are envisioned in the management of such funds and means of continuing operations at the close of each fiscal year.

(6) The military departments and Joint Chiefs of Staff all recommended against a management fund. As stated by the latter:

"Analysis indicates that the management fund was recommended primarily to overcome deficiencies in the selection of the source and placement of orders for large shipments of petroleum products to be moved by ocean-going tankers. Centralization of source selection in one agency would contribute to more economical use of available shipping by minimizing split loadings and split discharges. Every effort should be made to realize all economies available in this area. The Joint Chiefs of Staff believe these economies can be fully realized without the need for super-imposing a 'Management Fund' over the current stock funds of the Services. The need for additional capitalization funds, additional manpower, and accounting required could be eliminated by having the Defense Supply Agency exercise the authority to select the source for all petroleum cargoes destined for overseas or coastal ports in CONUS. Once the source has been selected, the Services will designate the ordering officer and make a direct citation of Service funds (except the Air Force, which utilizes inventory and capital control procedures). Since all the Services have collocated their petroleum inventory control points in the same building with the Defense Supply Agency at Cameron Station, the placement of orders with Service funds would require minimum coordination and achieve the desired objective without the need for a 'Management Fund' with its attendant costs and accounting duplication. The Joint Chiefs of Staff recommend that source selection responsibilities for all petroleum cargoes destined for overseas or coastal ports in CONUS be exercised by the Defense Supply Agency."⁴

b. Stock Fund. At the present time, each of the military departments owns bulk petroleum from the time of delivery from the contractor. The Services manage their stocks as war reserve and operating stocks, making issues and transfers as necessary to meet the needs of their operating forces. Each Service uses a stock fund for management purposes up until an appropriate point of the delivery to the operating forces or other user. For example, Army stocks leave the stock fund at the time of delivery to a general support unit. For underway replenishment at sea, Navy stock leaves the Navy's stock fund when transferred from a fleet oiler to a ship's bunkers. In the case of the Air Force it is at the time of delivery to an aircraft.

(1) The control of war reserve and operating stocks by the Service chains of command is a critical element of logistic support upon which the operating forces are dependent. Placing funding control or ownership for all or a part of these stocks elsewhere than in the Service concerned would seriously fragment responsibility and authority. It would be counter to the principles of sound management and could seriously degrade the readiness and effectiveness of combat forces.

⁴Joint Chiefs of Staff, Memorandum JCSM-623-68, subject: Report of the DOD Petroleum Management Study Group, 23 October 1966.

(2) "Option 4" consisted of "Expanding DSA's responsibilities and functions to assume petroleum management responsibilities and functions now assigned to the military departments."⁵ The DOD Petroleum Study Group stated that this option would "create major problems in functional areas which are now being performed effectively" and "would cause the most turbulence in the petroleum support system."⁶ Far more serious would be the implications from the point of view of the Secretaries of the military departments and Service chains of command carrying out their fundamental responsibilities for support of their forces, and the readiness and effectiveness of these forces.

5. Conclusions and Recommendations

a. Conclusions

(1) Establishment of a management fund is neither necessary nor desirable (paragraph 4a).

(2) Problems regarding source selection and ordering where deliveries by ocean tankers are involved will be minimized provided the Air Force places such orders through the Defense Fuel Supply Center, as recommended in paragraph 3b (paragraph 4a).

(3) Adoption of Option 4 or use of a Defense Supply Agency stock fund for bulk petroleum would be inconsistent with basic responsibilities assigned the military departments and chains of command for logistic support of their forces, and could result in degrading readiness and effectiveness (paragraph 4).

b. Recommendations. The Board recommends that:

(PL-22) Neither the management fund nor the DSA fuel stock fund be established (conclusions (1), (2), and (3)).

(PL-23) No further consideration be given to Option 4 (conclusion (3)).

(PL-24) In the case of bulk petroleum requiring shipment by ocean tanker, the Air Force place orders through the Defense Fuel Supply Center (conclusion (2)).

6. RECOMMENDATION 3. "That if some option other than Option 3 or 4 is adopted, it should include as a minimum the elimination of the duplicating functions of the five Air Force Aerospace Fuels Field Offices (AFAFFOs), consolidating and jointly staffing, under the DFSC, the remaining field offices as needed."⁷

a. Discussion

(1) This recommendation pertains to five Air Force fuels field offices which were located at McGuire AFB, New Jersey, Lynn Haven, Florida; St Louis, Missouri; Houston, Texas; and San Pedro, California. The field offices are authorized a total of 92 billets, utilizing officer, airman, and civilian personnel. Office manning varies from 11 to 24.

(2) The Air Force is the principal user of POL bulk products in CONUS. The field offices, organized in 1952, have been utilized to perform detailed, integrated management characterized by the following:

(a) The Large Number of Users. Direct support is rendered to 254 Air Force activities. Direct and indirect support is furnished to a total of 187 other using activities (Army, Navy, NASA, and commercial contractors).

⁵Secretary of Defense, Memorandum, subject: Management of Petroleum, 21 June 1968.

⁶Department of Defense, Assistant Secretary of Administration, Report of the Petroleum Management Study for the DOD, Vols. I-III, October 1968 (FOR OFFICIAL USE ONLY).

⁷Secretary of Defense, Memorandum, subject: Management of Petroleum, 8 May 1969.

(b) Quantities. During FY 69 the AFFOs supported the 441 using activities through 210 shipping points with 153.7 million barrels of petroleum products valued at \$792.5 million and various missile fuels valued at \$31.4 million.

(c) Various Modes of Shipment. Pipelines, barge, tanker, tank car, and specialized missile transportation equipment are all used. Necessary government bills of lading must be prepared. In FY 69, 38,473 Government bills of lading were issued by Field Offices to supply contractors.

(d) Requirement for Daily Management. The operating stock at most bases does not exceed 5 days. The mobility of Air Force units in response to exercises, training operations, hurricane evacuations, etc., cause wide local fluctuations in fuel requirements. Contractor tankage supplements the base stocks and must be called forward by close scheduling. This close scheduling frequently requires coordination with agencies of Military Traffic Management and Terminal Service (MTMTS).

(e) Stock Fund Requirements. The Air Force is the only Service authorized by the Bureau of the Budget to operate an inventory and capital control procedure for stock fund management. Such an operation requires close management of fuel from the source to the point of consumption. Verification of quantities as well as accurate transaction reporting are necessary for the proper operation of the fund.

(f) Pre-Positioned War Reserves. Storage programs for the first half of FY 70 included storage of 12.8 million barrels of product in 38 retail distribution stations with an additional 140,000 barrels stored by the Air Force for other Services under terms of inter-service support agreements.

(g) Relationship With Offices of Emergency Planning. There are eight Regional Offices of Emergency Planning with CONUS. Coordination with these agencies is maintained to arrange for distribution of fuels to air bases in time of emergency.

(3) The Petroleum Study Group briefly visited only one Air Force field office. The POL committee of the JLRB with representatives of each of the Services and the Defense Supply Agency visited all of the Field Offices. Each member visited at least two of the offices to get a better understanding of their operations. The visits included observing the annual Distribution Pattern Evaluation Conferences at three of the field offices during which one or more team members were present. During visits, personnel involved in supply of fuels and missile propellants, transportation, and quality surveillance areas were questioned in detail on each functional area. The team found that:

(a) The Air Force Fuels Field Offices fulfill the operational requirement unique to the Air Force and are operationally oriented to the needs of the many activities that they support. They serve 254 Air Force and 167 other Service, governmental, and contractor activities that are widely dispersed in CONUS and offshore. These offices utilize and manage all modes of transportation common to petroleum products and some peculiar only to missile propellants and chemicals. The Field Offices manage and work closely with 283 facilities such as retail distribution stations, pipelines terminals, and shipping points.

(b) The retail distribution stations used by the Air Force provide dispersed storage at strategic locations and are extensions of on-base storage systems for peacetime and Pre-Positioned War Reserve Stocks. The Air Force does not have military-operated terminals as does the Navy to provide a collateral function of area coordination. The POL support services are not limited to port or coastal areas as is the case in the Navy; nor can they be compared to those of the Army for its ground fuels that are mostly provided from bulletin-type contracts. Field Office management is not restricted to petroleum products but includes missile propellants, chemicals, and gases.

(c) The Field Offices did not make, as stated in the Petroleum Study Group Report an analysis of established contracts as awarded by the DFSC. Contracts were accepted

as received. For the purpose of providing using activities, suppliers, quality surveillance personnel, and retail distribution stations with the necessary information affecting future distribution of requirements, the field offices issued a plan of operation for the forthcoming contract period. These plans provided in simple terms on one or two pages all the information required by the using activity. This method of providing such information was effective and eliminated the need for providing completed contracts to all using activities. Frequently, a single source within an area supported several local activities as well as offshore installations. Therefore, a well-defined POL operational distribution plan which would allocate to an activity the maximum quantity of product that it was authorized to draw within a specified period was necessary and required constant coordination by the Field Office and the user.

(d) The annual Distribution Plan Evaluation Conference was not a duplication of actions performed by the DFSC. The Field Offices accepted the distribution pattern established by DFSC in the contract award process and then issued their area distribution plans accordingly. The Evaluation Conferences were held long after the Field Office distribution plans were issued and implemented. Each distribution plan prepared by the Field Office was reviewed by a specialized team of Air Force experts in the areas of requirements, transportation, quality, and programming functions. This review was an in-house, self-evaluation process, and the results, where appropriate, were included in future Buyers Guide preparations. Other features of this evaluation process included improved utilization of on- and off-base storage and distribution facilities, and promoted construction or leasing of additional storage where required. The evaluation procedure, in effect for 3 years, has produced a verified cost reduction of \$1.4 million.

(e) Each field office maintained close coordination with the regional Office of Emergency Planning in the process of establishing the requirements and arranging for the distribution of fuels to air bases under wartime or emergency conditions.

(f) The assigned quality surveillance personnel worked at retail distribution stations and on all pipeline moves to ensure that quality of product was maintained, and to validate the quantities moved and inventories maintained by contractors. These inspectors also performed Property Administration duties, providing technical assistance to bases supported and serving as relief for inspectors at other locations. (See Chapter VI for details on quality surveillance matters.)

(g) There was redundancy in actions to notify procurement inspectors and contractors involved with tanker liftings. Notification actions were performed by the field offices, the area MSTs representative and the procurement inspectors.

7. CONCLUSIONS AND RECOMMENDATIONS

a. Conclusions

(1) The functions performed by Air Force Fuels Field Offices are necessary for the accomplishment of the mission of the Air Force and all activities supported by the field office (paragraph 6a(3)).

(2) The field offices were performing their assigned task in an efficient manner, and they were responsive to the operational requirements of the activities they supported (paragraph 6a(3)).

(3) The field offices adjusted to peak demands and the numerous changes in operational requirements and the associated changes in ordering, transporting, and arranging for barge and tanker liftings of products (paragraphs 6a(2) and 6a(3)).

(4) The field offices relieved the air bases and other activities that they supported of a considerable workload in establishing product requirements, arranging for transportation of products, placing orders, maintaining war readiness materiel stocks, establishing emergency distribution plans, maintaining quality surveillance over products, and monitoring fuel distribution and its utilization through area distribution plans (paragraphs 6a(2) and 6a(3)).

(5) The process of notifying all concerned with tanker movements should be simplified, and one activity should be assigned the responsibility to coordinate all of the local detailed arrangements for such liftings (paragraph 6a(3)(g)).

(6) The area support arrangements between the Air Force Fuels Field Offices and other Services and agencies were providing effective utilization of resources and personnel with a minimum of duplication (paragraph 6a(3)).

b. Recommendations. The Board recommends that:

(PL-25) The five Air Force Fuels Field Offices should remain under operational control of the Air Force and continue to perform duties in the geographical areas as now assigned (conclusions (1), (2), (3), and (4)).

(PL-26) The consolidation of the Air Force Fuels Field Offices and their assignment to the Defense Fuel Supply Center is not recommended (conclusions (1), (4), and (6)).

(PL-27) Some duplication is considered necessary to ensure proper and timely notification of all concerned with tanker lifting arrangements, and it should properly be a specifically assigned task to the Defense Fuel Supply Center to notify everyone concerned (conclusion (5)).

(PL-28) The Army and Navy should, where appropriate, attend the area annual review and investigate the use of similar local procedures used by Air Force Office of Emergency Planning Regional Offices for the distribution of fuels under emergency conditions (conclusion (4)).

(PL-29) For a better insight of detailed local information as it affects the purchasing of petroleum products, a Defense Fuel Supply Center representative should attend the annual Distribution Plan Evaluation Conferences held at the Air Force Fuels Field Offices (conclusion (4)).

8. RECOMMENDATION 4. "That for the most efficient and effective management of petroleum in DOD the Optimum Management Option presented in Section III E of Chapter 7 (Volume I)⁸ be adopted."⁹

a. Discussion. The DOD Petroleum Study Group Report highlighted five features. These features are set forth below together with comments of the Joint Logistics Review Board.

(1) "This option does not provide for total integrated management of bulk petroleum but does permit the retention by DSA of the responsibility for integrated management of packaged petroleum."¹⁰

JLRB Comment. Concur. The critical dependence of the operating forces of each of the Services on fuel is such that each military department and its chain of command must have control over POL logistic support adequate to ensure the readiness and effectiveness of the forces for which it is responsible. Furthermore, each Service has unique problems pertaining to bulk petroleum support, related to environment, mobility, and role. Total integrated management is thus undesirable and impracticable. The present responsibilities relating to the supply of packaged petroleum are satisfactory.

(2) "This option provides for the assignment of the individual management function to that agency, DSA or the departments which had the greatest capability to discharge the specific functions. Coordination would be required between the agencies involved and the recommended

⁸ Report of the Petroleum Management Study Group for the DOD, October 1968.

⁹ Secretary of Defense, Memorandum, subject: Management of Petroleum, 8 May 1969.

¹⁰ Assistant Secretary of Defense for Administration, Report of the Petroleum Management Study for the DOD, Vols. I-III, October 1968 (FOR OFFICIAL USE ONLY).

assignments if the report had taken this into consideration."¹¹ (Under this recommendation were seven subheads each of which will be discussed separately.)

JLRB Comment. Although not specifically stated here, it is clear that the DOD Petroleum Study Group took into account more than management capabilities. The first consideration must be the basic responsibilities concerning the operating forces and their support, and the need for authority commensurate with such responsibilities. (See Chapter 3 of Volume II, and Chapter II of this monograph.)

The centralization of bulk petroleum contracting and other responsibilities under DSA place extraordinary demands on close coordination between the Defense Supply Agency, the military departments, and the unified chain of command. Regardless of the specific assignments, coordination must be particularly close between DFSC and the Service ICP. Collocation at Cameron Station and frequent formal meetings of all concerned are an essential element. The present policies pertaining to assignment of specialists on key staffs (e.g., Joint Petroleum Offices) and special relations set forth by Joint Chiefs of Staff Publications 2 and 3 facilitate close coordination. To strengthen this close coordination further, the JLRB considers that there is a need for the proposed changes in the existing DOD Directive 4140.25, Management of Petroleum Products, January 6, 1965 as outlined in Chapter V and Appendix H of this monograph.

- (a) "The requirements functions would remain with the department..."¹²

JLRB Comment. This is essential.

- (b) "The procurement function would remain with DSA/DFSC who would be given the authorities and responsibilities in source selection, contract administration and ordering DFSC would also be provided the 'Management Fund'" ¹³

JLRB Comment. The nature of petroleum and the petroleum industry make it desirable that procurement be assigned to one agency, as is now the case.

If there are any doubts as to the basic responsibility of the contracting officer (DSA/DFSC) for contract administration, when any portion of this responsibility is assigned to a Department or other agency, the relationships to DSA/DFSC should be clearly defined. Discussion, Conclusions, and Recommendations concerning source selection ordering are contained in paragraphs 2 and 3 of this chapter.

- (c) "The distribution functions so far as source selection, distribution plans and ordering would be assigned to DSA. . . . With respect to the transportation function, DSA would continue to be responsible for tanker scheduling." ¹⁴

JLRB Comment. Comments, conclusions, and recommendations on source selection, distribution plans, and ordering are contained in paragraphs 2 and 3 of this chapter. Concur that DSA should continue to be responsible for arranging with MSTs tanker schedules.

- (d) "The inventory management function would be assigned to the departments, and to the unified commanders to reflect the proper interest of each in this function, as described in the summary conclusions, Section II 4 a of the October 1968 Report." ¹⁵

JLRB Comment. Reference to the report indicates concurrence in the present assignments of responsibilities and relationships of the departments, Services, and unified commanders. The

¹¹ Ibid.
¹² Ibid.
¹³ Ibid.
¹⁴ Ibid.
¹⁵ Ibid.

unified commanders are not directly involved in inventory management, but have authority commensurate with their responsibilities for the operational control of assigned forces. (See Chapter II of this monograph.)

(e) "The financial management function would be assigned to the departments so far as budgeting, stock fund management and accounting are concerned, but with respect to funding, DSA would be authorized a 'Management Fund' to finance procurement of bulk petroleum products and related transportation to first point of acceptance by a department stock fund."16

JLRB Comment. See paragraphs 4 and 5 of this chapter.

(f) "The cataloging and standardization function would remain assigned to DSA...."17

JLRB Comment. Concur.

(g) "The mobilization planning function would be retained under the overall supervision of ASD (I&L)...."18

JLRB Comment. Concur.

(3) "The adoption of this Option would provide for overseas operations to continue under the currently effective and efficient current arrangements...."19

JLRB Comment. Whereas overseas operations are basically sound, recommendations elsewhere in this JLRB report should result in further improvements.

(4) "The adoption of this option would require that the interface between DFSC and Detachment 29 be improved by granting the requisite authority to Detachment 29 and augmenting its personnel."20

JLRB Comment. Concur. It is noted that the Air Force and the Defense Supply Agency concurred with this recommendation and did establish such an agreement which was forwarded to the Office of the Assistant Secretary of Defense for Installations and Logistics on 23 October 1969 for approval. The DOD Petroleum Study Group found that there was no need for an interface between the DFSC and Air Force accounting personnel at Cameron Station. The JLRB concurs with this position pertaining to such an interface, and considers that the location of the Air Force accounting function should be determined by the Air Force to provide the most efficient and economical petroleum management system.

(5) "The adoption of this option would not in itself correct all of the deficiencies found in the bulk petroleum system, organization and procedures. It would be necessary to take the specific actions recommended in the EVALUATION chapters of the completed report."21

JLRB Comment. The Secretary of Defense has already approved or passed on to the military departments and Defense Supply Agency many of the specific actions covered in the evaluation chapters and has rejected others. The JLRB has reviewed in detail all the evaluation chapters and has decided that no further consideration of specifics of those chapters is required.

b. Other Considerations. At the start of the DOD Petroleum Study Group, the unified commanders were advised of the four options being studied, and their views were solicited. In their replies (see Appendix D of this monograph):

16 ibid.

17 ibid.

18 ibid.

19 ibid.

20 ibid.

21 ibid.

(1) The Commander in Chief, Europe (CINCEUR), recommended continuing the status quo based on the proven effectiveness and responsiveness of the present system in this theater.²²

(2) The Commander in Chief, Atlantic (CINCLANT), recommended the second option which had to be with continuing the status quo plus standardization of ICP responsibilities, functions, and procedures.

(3) The Commander in Chief, Alaska (CINCAL), submitted views on each option without making a recommendation.

(4) The Commander in Chief, U.S. Southern Command (USCINCSO), considered the existing organization to be responsive to the needs of the unified command, and the establishing of a single manager to be impracticable.

(5) The Commander in Chief, U.S. Strike Command (CINCSRIKE), recommended that "The current organization appears to provide an optimum solution to divergent requirements of centralized control and service logistic responsibilities. . . , any organization which reduced the Service responsibility or disperses the expertise available to the Services must eventually effect the Service capability to field qualified POL systems operating units."²³

(6) The Commander in Chief, Pacific, (CINCPAC), on 13 July 1968, pointed up problems, concerning submission of requirements to DFSC and ICPs; variations in accounting, reporting, and pricing; the need for simple combat zone accounting procedures; problems relating to procurement inspection and quality surveillance; and the need for facilities. CINCPAC also indicated that increased centralization of POL management, including centralized POL stock and Service contract funding, could greatly assist in solving these problems. With reference to the Service ICPs, CINCPAC stressed the importance of taking into account the military aspects of controlling POL. CINCPAC requested the findings of the study for comment.

(7) Subsequently, on 5 January 1970, CINCPAC provided further views to the Joint Logistics Review Board, stating:

"While I concur in the need for more effective interdepartmental coordination of POL logistics management at the Washington level, I would prefer to see this accomplished without further diminishing Service responsibilities. I think that this objective could be achieved by reconstituting the Joint Petroleum Committee and providing it with a Secretariat, which would function as the central policymaking, planning, and coordinating staff for POL matters throughout the Department of Defense. The committee and its Secretariat should operate under a charter from JCS, thus insuring the application of firm military control over POL logistics functions."²⁴

(8) In general, all of the unified commands, except CINCPAC, generally supported "status quo." CINCPAC originally supported centralization of management and of stock funding, but later modified that position to stressing Service responsibilities with coordination at the Washington level by reconstructing the Joint Petroleum Committee. The JLRB positions and recommendations developed in this monograph appear in consonance with the views of the commanders of the unified commands, retaining necessary functions in the Services, providing for a Joint Petroleum Committee, and clarifying division of responsibilities between the Services and the Defense Supply Agency.

9. **SUMMARY.** Table 9 summarizes the JLRB position on the principal elements contained in "Optimum Management Option."

²²See Appendix D of this monograph.

²³See Appendix D of this monograph.

²⁴Appendix D, paragraph 9a, of this monograph.

TABLE 9
SUMMARY OF ESSENTIAL ELEMENTS OF
THE OPTIMUM MANAGEMENT OPTION

<u>Element</u>	<u>JLRB Position</u>
1. Total integrated management for bulk petroleum was not recommended but the Defense Supply Agency should retain the responsibility for integrated management of packaged petroleum.	Concur.
2. The following management functions should be assigned to the Defense Supply Agency or the departments as indicated.	
a. The requirements functions would remain with the departments.	Concur.
b. The procurement function would remain with the Defense Supply Agency Defense Fuel Supply Center.	Concur.
c. Defense Supply Agency Defense Fuel Supply Center would be given authorities and responsibilities in:	
(1) Source selection and ordering.	Concur with source selection and ordering for large shipments of petroleum products to be moved by ocean-going tankers. Other source selections and ordering, including tankers operating on the Great Lakes should be retained by the military departments.
(2) Contract Administration	Concur.
d. The Defense Supply Agency would continue to be responsible for tanker scheduling.	Concur.
e. The Defense Supply Agency would assume the distribution plan function.	There should be no changes in the authority of a military department to issue its own distribution plans.
f. The inventory management function should be assigned to the departments, and the unified commands to reflect the proper interest of each in this function.	Concur.
g. Budgeting and stock fund management should be assigned to the departments.	Concur.
h. The Defense Supply Agency would be authorized a management fund.	Non-Concur.
i. Cataloging and standardization would remain assigned to the Defense Supply Agency.	Concur.

TABLE 9 (Continued)

<u>Element</u>	<u>JLRB Position</u>
j. Mobilization planning function would remain under the overall supervision of the Assistant Secretary of Defense for Installations and Logistics.	Concur.
3. Overseas operations would continue under current arrangements.	Concur. Clarification of responsibilities as needed are specified in the JLRB report.
4. The interface between the Defense Fuel Supply Center and Detachment 29 would be improved by granting the requisite authority to Det. 29 and augmenting its personnel.	Concur. The Air Force and the Defense Supply Agency did establish and forward an agreement to the Office of the Assistant Secretary of Defense for Installations and Logistics that would implement this recommendation.
5. It would be necessary to take the specific actions recommended in the evaluation chapters of the completed report.	The JLRB concurs with the position taken by the Secretary of Defense on actions recommended in the evaluation chapters and has decided that no further consideration of specifics of those recommendations is required.

10. CONCLUSIONS

(a) The Optimum Management Option as presented in the Report of the Petroleum Management Study Group for the DOD, dated October 1968, is not a simple statement of recommended management actions. The option is an extremely involved and complex group of recommendations with numerous references and cross-references. The manner in which the recommendations were cross-referenced could be interpreted that every recommendation in the report was a part of the Optimum Management Option. The Secretary of Defense has already approved or passed to the military departments and the Defense Supply Agency as advisory many of the specific actions covered in the evaluation chapters and has rejected others. Because of the structure of the Report of the Petroleum Management Study Group for the DOD, it is extremely difficult to specifically and simply identify what additional actions in the evaluation chapters should be addressed by the JLRB. The JLRB reviewed in detail all the evaluation chapters and has decided that no further consideration of specifics of the evaluation chapters is required. The actions already approved by the Secretary of Defense and those recommended by the JLRB will provide the necessary improvements, systems, organization, and procedures for petroleum management within the DOD. The Optimum Management Option has been discussed in detail on the preceding pages. For easy reference, the essential elements of this option as interpreted by the JLRB, and the JLRB position on each is set forth in Table 9.

b. Certain of the recommendations of the Joint Logistics Review Board in this monograph specifically support the JLRB position on the Optimum Management Option; other improvements will result from the remaining recommendations. The most important of these additional improvements will result from:

(1) Clarification of responsibilities of the Defense Supply Agency Defense Fuel Supply Center with particular attention to contract administration in overseas areas.

(2) Standardization of procedures, regulations, forms, and documents related to
POL.

(3) Establishment of a Field Assistance Program under the Defense Supply Agency Defense Fuel Supply Center and in coordination with the military departments.

(4) Establishment by the Joint Chiefs of Staff of a Joint Petroleum Committee. The proposed revision to DOD Directive 4140.25, Management of Petroleum Products, presented as Appendix H, will implement these improvements.

c. The actions approved by the Secretary of Defense in his 8 May 1969 memorandum together with the actions recommended by the JLRB, particularly those covered in the proposed revision of DOD Directive 4140.25, will provide a sound basis for the improvements necessary in the management of POL products.

d. Because of the complexity of references and cross-references involved in the Optimum Management Option, and the modifications and additions considered necessary by the JLRB, the Optimum Management Option cannot be referred to in precise terms. Therefore, the term "Optimum Management Option," as it applies to POL improvements in the Department of Defense, should be eliminated.

e. If the recommendations of the Secretary of Defense are implemented and those of the JLRB are adopted, no specific additional recommendations are required.

CHAPTER VIII

SUMMARY

CHAPTER VIII

SUMMARY

1. OVERVIEW

a. Bulk fuels in sufficient quantities and of proper quality are one of the essential items for the successful conduct of modern military operations. POL support in Vietnam was responsive to the needs of the operating forces despite the extreme conditions encountered in an undeveloped country. Although petroleum, oil and lubricants (POL) was singled out in operational commanders' reports as one of the outstanding supply support performances of the conflict, the Board's review of the Vietnam operations has nevertheless identified many problems in fuel support.

b. The demands for fuel in support of the Vietnam conflict were high, particularly those for aircraft. These demands resulted from the use of high-performance aircraft of the Air Force, Navy, and Marines; the use of B52's; the extensive use of aircraft for logistics; and constant employment of large numbers of Army helicopters. Heavy dependence was placed on deliveries by fixed-wing aircraft and helicopters to outlying sites from main land-and-water enclaves. These deliveries were necessary because of the country-wide nature of the conflict, the insecurity and inadequacy of land lines of communications, and the extensive waterway system. The Army provided versatile and varied POL supply by the use of large numbers of tank trucks in conjunction with Y-boats, barges, and hundreds of miles of Army-constructed and Army-operated pipelines in support of Army, Navy, and Air Force operations. Extensive use was made of amphibious ship-to-shore delivery systems, coastal shuttle craft, bladders in landing craft, and bladders for delivery by air. Underway replenishment of aircraft fuel to carriers far surpassed even the records of World War II.

c. POL support during the military advisory phase had been furnished by commercial companies, including deliveries within Vietnam by subcontractors. With the deployment of U. S. combatant units, a military POL supply system was established in Vietnam to supplement the commercial system. Although consideration was given to the replacement of commercial support by the military system, the use of commercial facilities and services continued and expanded along with the military system. In addition to the normal responsibilities of each Service for the support of its forces, common supply was provided paralleling the other support responsibilities of the Navy in I Corps Tactical Zone (CTZ) area and the Army in all other CTZ areas.

d. POL storage in Vietnam was marginal at best and required extensive use of bladders, expeditionary systems, and floating storage on a continuous basis. Early efforts to induce contractors to build additional storage met with little success and there were long delays in building semipermanent systems through service-sponsored programs to meet the needs of the expanding conflict. Consequently, overall costs of providing petroleum products were far higher than would have been necessary if an early decision had been made to construct sufficient steel military storage for the economic utilization of tankers.

e. The large tankers of the commercial fleet combined with the lack of an adequate storage capability at the deep-water ports resulted in the need for expensive transshipments of products through Japan and Singapore by smaller Military Sea Transport Service (MSTS) and commercial tankers. The continuing trend away from medium tankers on the part of industry to larger and larger ones poses serious problems for the future support of military operations.

f. The continued extensive use of contractors for storage and delivery, the commingling of Government and commercial products throughout the Southeast Asia distribution system, and actions to avoid certain taxes imposed serious problems in inspection, property administration, other forms of contract administration, and accountability.

g. The preceding paragraphs have briefly summarized the POL logistics situation as it existed in the Vietnam era. The historical review on which the summary is based focused attention on three primary areas, which are treated in detail in this monograph for in-depth review and analysis. These areas are:

- (1) Role of Contractors in POL Support in Vietnam
- (2) Property Administration and Accounting
- (3) Special Support Problems.

h. In addition to those three areas selected by the Board for an in-depth review, the Board was also directed by the Secretary of Defense to analyze four unresolved recommendations from the October 1968 Report of the Department of Defense Petroleum Management Study Group.

i. The following paragraphs summarize the major lessons learned, list the most significant 21 of the 29 recommendations that resulted from the examination and analysis of POL support during the Vietnam era, and summarize the specific review requested by the Secretary of Defense in his memorandum of 8 May 1969.

2. ROLE OF CONTRACTORS IN POL SUPPORT IN VIETNAM

a. Lessons Learned

(1) Commercial POL support was a responsive means of providing POL support to U.S. forces in Vietnam until the buildup in 1965 when both military and commercial systems were required. However, the Vietnam experience showed that the oil industry should not be relied on to build efficient, integrated commercial facilities to keep pace with growing military demand unless there are Government commitments covered by specifically funded construction and service contracts. Therefore, the Government should be prepared to build sufficient facilities to meet increased military demand when contractors are not contractually committed to do so.

(2) Adequate Government-controlled POL facilities were never built. As a result, ships were held for floating storage, and costly transshipment of POL was required. Over \$25 million a year in transportation and service charges could have been saved by the construction of adequate Government POL storage and receipt facilities in Vietnam.

b. Recommendations

(PL-1) Contingency plans specifically address the following to the extent appropriate to the situation:

- (a) Initial use of floating storage.
- (b) The construction of facilities adequate for the off-loading of large tankers, storage, and transshipment.

3. PROPERTY ADMINISTRATION AND ACCOUNTING

a. Lessons Learned

(1) The accounting problems that were encountered in POL support in Vietnam were primarily the result of a requirement for detailed financial accounting for reimbursement procedures and a lack of adequate contract administration. Substantial improvements in the situation were made in 1968 with the adoption of reimbursement procedures based on the bulk fuels report.¹ However, many of the problems of a combat area will be solved only with the assignment of a qualified Contracting Officer's Representative in-country.

(2) The Vietnam experience clearly demonstrated that, in an unstable area, the extent of financial accounting and the method of reimbursement should be decided early in the operation, preferably prior to deployment of forces.

(3) A joint Service field assistance team would have been of great value in Vietnam in lessening problems in accounting as well as in assisting in the area of contractor relations and contract administrations.

(4) The relationships and responsibilities of the Defense Supply Agency/Defense Fuel Supply Center and other Department of Defense (DOD) activities was not clearly defined as to their respective roles in contract administration for POL overseas in DOD Directive 4140.25, Management of Petroleum Products, January 6, 1965, and the implementing instructions thereto.

(5) Much of the joint Service participation in POL policy making was lost with the inactivation of the Directorate, Petroleum Logistics Policy, Office of the Secretary of Defense for Installations and Logistics, in 1966. A high-level Joint Petroleum Committee with representation from the Services, Defense Supply Agency, and Joint Chiefs of Staff would fill the void left by the inactivation of the Directorate in 1966 and would enhance overall POL logistics.

b. Recommendations

(PL-7) Planning for contingencies provide one of the following methods of reimbursement for POL to avoid detailed accounting in a combat area, specifying either:

(a) POL be supplied by the Service responsible for interservice supply support for overseas areas on a nonreimbursable basis, or

(b) Reimbursement be provided by all Services on a factored basis with handling losses prorated similar to procedures established in June 1968 in Vietnam.

(PL-9) Directives be clarified to fix unambiguously on Defense Supply Agency/Defense Fuel Supply Center responsibility for and surveillance over the administration of Defense Supply Agency contracts for supply of bulk petroleum and for services related thereto.

(PL-10) Defense Supply Agency/Defense Fuel Supply Center, in coordination with the military departments, develop and maintain compatible procedures, regulations, forms, and other documents for the supply, storage, distribution, and accounting of POL products.

(PL-11) Defense Supply Agency/Defense Fuel Supply Center, in coordination with the military departments, develop a POL Field Assistance Program to provide assistance and advice to installations and activities of the military services, other Department of Defense

¹ Commander in Chief, Pacific, Message, subject: Monthly Bulk Fuels Report (U), dated each month (CONFIDENTIAL).

components, and contractor activities. The objectives of the Field Assistance Program are to evaluate management functions performed in the field; determine the adequacy of Defense Fuel Supply Center-sponsored procedures and regulations; identify problem areas and recommend preventive measures; identify actions necessary to improve effectiveness and economy; and provide military services and other Department of Defense components information and advice concerning problems requiring their attention for corrective actions. A proposed revision of Directive 4140.25 is in Appendix H, and when approved will implement Recommendations (PL-9), (PL-10), and (PL-11).

(PL-12) The Joint Chiefs of Staff establish a Joint Petroleum Committee to:

- (a) Advise and assist the Joint Chiefs of Staff in establishing priorities and allocations of petroleum products when required during periods of international tension and war.
- (b) Resolve problems when the Services and the Defense Supply Agency cannot agree.
- (c) Ensure the development and proper functioning of a Field Assistance Program.
- (d) Monitor the responsibility assigned to the Defense Supply Agency in coordination with the military departments to standardize procedures, regulations, forms, and other documents for the supply, storage, distribution, transfer, and accounting for POL products.
- (e) Review plans for the supply of POL in time of war.
- (f) Recommend petroleum policies. A proposed charter for the Joint Petroleum Committee is in Appendix I.

(PL-13) As a matter of priority, the Defense Fuel Supply Center, in coordination with the military departments, establish a field assistance team to visit Vietnam, evaluate POL contract administration, and make specific recommendations to the Services and the Defense Supply Agency for improvement.

(PL-14) The Defense Supply Agency/Defense Fuel Supply Center in coordination with the military departments, and with the guidance of the Joint Petroleum Committee, if established, give high priority to the rewriting of existing instruction and directives. The purpose should be simplification and elimination of ambiguities regarding functions, responsibilities, duties, and relationships.

4. SPECIAL SUPPORT PROBLEMS

a. Lessons Learned

(1) Procurement quality assurance was very difficult to achieve in Vietnam as a result of extensive use of nonmilitary-controlled commercial facilities, lack of sufficiently qualified inspectors, and the lack of direction and control over procurement quality assurance personnel. The extensive use of commercial facilities created the need for inspectors at many areas scattered throughout Vietnam. The Navy, which had been assigned procurement quality assurance responsibilities in the Vietnam area, tried to obtain civilian volunteers for the job, but insufficient numbers were available. There was also an insufficient number of trained military personnel to fulfill the requirement. Those personnel who were obtained were responsible directly to the Navy Fuel Supply Office in Washington rather than being assigned to a command in the area.

(2) In some areas, notably Vietnam and Thailand, the assignment of procurement quality assurance has not always been consistent with the assignment of other logistics support responsibilities. In Thailand, for example, where the Air Force was primary consumer, the

Army was charged with partial support of POL while the Navy was responsible for procurement quality assurance. To the extent practicable, the assignment of responsibilities should not be fragmented.

(3) The situation with regard to the world tanker fleet is steadily changing. Commercial tankers are being built with larger capacities each year, and the smaller tankers that are capable of servicing most military ports are getting older. Most military ports do not have sufficient storage or water depth to accommodate the newer tankers. POL demands at most of these ports are not great. The requirement for a fleet of handy-size tankers to fill the void left by the new tanker trend has been recognized and should be expedited.

(4) Operations in many parts of Vietnam were directly dependent on shallow-draft T1's and Navy AOGs for coastal movement of POL from main to remote storage areas. All military vessels of this type are quite old and should be replaced with a new design of comparable capabilities to maintain the capability for coastal operations.

b. Recommendations

(PL-15) Services maintain a nuclei of qualified junior officers and senior noncommissioned officers with billets to maintain POL procurement inspection proficiency for responding to shifting workloads and for assignment in undesirable or hostile areas.

(PL-16) Joint Directive DSAM 4220.1, AR 700-9100.5, AFR 67-142C, MCO 10340.16A, and NAVSUP PUB 5005 include, in the inspection assignment policy section, a statement indicating that to the extent practicable Procurement Quality Assurance inspection should be assigned so as to coincide with other logistic responsibilities.

(PL-17) The handy-size tanker program be implemented as soon as practicable.

(PL-18) A program to replace the old T-1 tankers and AOGs be implemented.

5. REVIEW OF REPORT OF THE PETROLEUM MANAGEMENT STUDY GROUP FOR THE DOD, OCTOBER 1968

a. Recommendations of Colglazier Report. The Secretary of Defense's memorandum of 8 May 1969, Management of Petroleum, requested a position by the Joint Logistics Review Board on four recommendations from the Report of the Petroleum Management Study Group for the DOD dated October 1968 (Colglazier Report) which had received general nonconcurrence. Other recommendations in the October 1968 report were either approved by the Secretary of Defense, passed to the military departments or the Defense Supply Agency as advisory, or rejected. The four recommendations referred to the Joint Logistics Review Board were:

(1) Recommendation 1. "That a single DOD agency (Defense Fuel Supply Center) be given full and sole authority for source selection and placing orders on contracts, with power of delegation as desirable, including the issuance of such distribution plans as necessary.

(2) Recommendation 2. "That if any other form of management short of fully integrated management (Option 4) is selected, a 'management fund' be authorized for the Defense Supply Agency to finance funded contracts, to fund orders placed by that agency and to fund first destination transportation for orders placed. That if Option 4 is selected, a Defense Fuels Stock Fund Division for bulk fuels be established with 'projects' corresponding to the present departmental stock fund division or 'material categories' for bulk fuels, to finance from time of order to issue to end-use or authorized customer.

(3) Recommendation 3. "That if some option other than Option 3 or 4 is adopted, it should include as a minimum the elimination of the duplicating functions of the five Air Force Aerospace Fuels Field Offices (AFAFPOs), consolidating and jointly staffing, under the DFSC, the remaining field offices as needed.

(4) Recommendation 4. "That for the most efficient and effective management of petroleum in DOD the Optimum Management Option presented in Section III E of Chapter 7 (Volume I)² be adopted."³

b. JLRB Recommendations on:

(1) Recommendation 1 of Colglazier Report

(PL-19) A single DOD agency (Defense Supply Agency/Defense Fuel Supply Center) be given full and sole authority for source selection and placing orders for large shipments of petroleum products to be moved by ocean-going tankers, except tankers operating on the Great Lakes, to meet the requirements of the military departments. The authority may be delegated by the Defense Supply Agency.

(PL-20) Except where ocean-going tanker shipments are involved, military departments retain the authority for source selection and ordering, and for the delegation of such authority as appropriate.

(PL-21) There be no changes in the authority of a military department to issue its own distribution plans.

(2) Recommendation 2 of Colglazier Report

(PL-22) Neither the management fund nor the DSA fuel stock fund be established.

(PL-23) No further consideration be given to Option 4.

(PL-24) In the case of bulk petroleum requiring shipment by ocean tanker, the Air Force place orders through the Defense Fuel Supply Center.

(3) Recommendation 3 of Colglazier Report

(PL-25) The five Air Force Fuels Field Offices should remain under operational control of the Air Force and continue to perform duties in the geographical areas as now assigned.

(PL-26) The consolidation of the Air Force Fuels Field Offices and their assignment to the Defense Fuel Supply Center is not recommended.

(PL-27) Some duplication is considered necessary to ensure proper and timely notification of all concerned with tanker lifting arrangements, and it should properly be a specifically assigned task to the Defense Fuel Supply Center to notify everyone concerned.

(4) Recommendation 4 of Colglazier Report. This recommendation is titled the Optimum Management Option. The JLRB position was set forth in Table 9, Chapter VII of this monograph.

c. Certain of the JLRB recommendations in this monograph specifically support the JLRB position of the Optimum Management Option (Table 9). Other improvements will result from the remaining JLRB recommendations. The most important of these additional improvements will result from:

(1) Clarification and extension of responsibilities of DSA/DFSC with particular attention to Contract Administration in overseas areas.

²Report of the Petroleum Management Study Group for the DOD, October 1968.

³Secretary of Defense, Memorandum, subject: Management of Petroleum, 8 May 1969.

POL

POL. (2) Standardization of procedures, regulations, forms, and documents related to

(3) Establishment of a Field Assistance Program under the DSA/DFSC.

(4) Establishment by the Joint Chiefs of Staff of a Joint Petroleum Committee. (The proposed revision to DOD Directive 4140.25, Management of Petroleum Products, in Appendix H will implement these improvements.)

d. The actions approved by the Secretary of Defense's memorandum of 8 May 1969, subject: Management of Petroleum, together with the actions recommended by the JLRB, particularly those covered in the proposed revision of DOD Directive 4140.25 will provide a sound basis for the improvements necessary in the management of POL products.

e. Because of the complexity of references and cross references involved, in the Optimum Management Option, and the modifications and additions considered necessary by the JLRB, the "Optimum Management Option" cannot be referred to in precise terms. Therefore, the term "Optimum Management Option," as it applies to POL improvements in the Department of Defense should be eliminated.

f. If the recommendations of the Secretary of Defense are implemented and those of the JLRB are adopted, no specific additional recommendations are required.

APPENDIX A
DETAILED DESCRIPTION OF POL SYSTEMS

APPENDIX A

DETAILED DESCRIPTION OF POL SYSTEMS

1. **INTRODUCTION.** The Secretary of each military department is responsible for the logistic support of its forces. In the specific area of petroleum logistics, each Service has a peculiar organization of management and utilizes methods adapted to satisfying the special requirements of its forces. These differences in petroleum management structures, and how each establishes various types of requirements and manages its financial matters are presented in this appendix.

2. **PETROLEUM MANAGEMENT IN THE ARMY.** Petroleum management in the Army is exercised at each principal level of command from Headquarters, United States Army, down to user level. In cases where there is not a specific activity or individual whose primary duty is petroleum management, all necessary management required for Class III A and III W is performed by allied supply activities or personnel.

a. **Department of Army Petroleum Management Functions.** The Department of Army Petroleum Staff Officer in the Office of the Director of Supply DCSLOG represents DCSLOG in the DA POL coordinating group and, in the capacity of DCSLOG Project Coordinator for POL, acts as the single point of contact on the Army Staff in all matters pertaining to POL. The Petroleum Staff Officer monitors DSA and Army management of bulk and packaged petroleum; prepares and makes recommendations on policies, planning operations, and management of petroleum resources; reviews worldwide military construction of petroleum facilities and comments on the validity of the facilities; reviews petroleum portions of worldwide contingency plans and projects; ensures effective implementation of plans; reviews pre-positioned war reserves and war stocks requirements and collaborates on development of joint strategic and logistical plans of JCS; serves as DCSLOG representative to offices and agencies outside DCSLOG on petroleum matters to include DA staff, OSD, JCS, DFSC; and maintains an active program of participation and interchange of information with the Navy, Marines, and Air Force in conduct of logistical studies in the Class III field; serves as point of contact for the DA staff for information on petroleum logistic matters; responds to inquiries by Congressional Committees and Investigators, CAC or Inspectors General pertaining to CL III; prepares and submits PORs for petroleum facilities and for input to other staff agencies which require it; and reviews R&D projects related to CL III Logistical Support (i. e., storage, dispensing and distribution).

b. **U. S. Army Petroleum Center.** The United States Army Petroleum Center (USAPC) is the Army activity responsible for the performance of those supply management functions, wholesale or retail as applicable, necessary to effect supply of petroleum products, petroleum containers, and accessories, and certain chemical materiel for the Army, worldwide. It is the point of contact for Army CONUS installations and Overseas Army Commands on matters pertaining to petroleum supply and supply requirements, Defense Fuel Supply Center contract changes, and commercial contractors performance. Additionally, it is the Army activity vested with the responsibility for resolving all Army petroleum supply problems which arise between Army installations, overseas Army commands and other military service, the Defense Fuel Supply Center and commercial contractors.

c. **Posts, Camps and Stations.** The petroleum management functions are decentralized. In CONUS, each post, camp, or station is billed directly for fuels used at that installation by the contractor. Products are ordered against DFSC contracts through contract bulletins. Items received through MILSTRIP procedures (packaged products) are paid for by stock fund reimbursements between depot and installations. Overseas procedures are similar with the major

command generally reimbursing USAPC for FOB-origin contract coverage. In-country contracts are negotiated by DFSC, but reimbursement is effected by the command directly to the contractor.

3. REQUIREMENTS

a. Peacetime Requirements. The guidelines for the supply of petroleum products for the active Army, National Guard, and Army Reserves are prescribed in AR 700-80. The USAPC serves as the Army focal point in the requirements cycle, and therefore is the proponent of AR 700-80. The detailed procedures requirements, submissions by posts, camps, and stations include submission schedules as well as complete instructions governing the preparation of the DA Form 2714 (CONUS Requirements for Petroleum Products). Guidance is given concerning local purchase authority, economic delivery quantities based on storage capacity, and mode of delivery. National Guard Pamphlet 45.4 provides supplemental guidance for supply of National Guard annual field training requirements.

(1) Bulk POL requirements developed by PC&S are submitted semiannually to USAPC for supply action (DA Form 2714, CONUS Requirements for Petroleum Products). After problems are resolved, a Military Interdepartmental Purchase Request (MIPR) is prepared by the USAPC and submitted to DFSC for contractual action. Special attention is given to the inclusion of all data which could favorably affect price quotations from prospective contractors. The requirements are analyzed, based on past consumption records and known program changes, for accuracy of estimates. Submissions are reviewed for administrative sufficiency concerning the types of products required, delivery method, storage capacity of receiving tankage, quantity per shipment, and desired delivery locations. Questionable areas are resolved with the submitting activities.

(2) Upon receipt of the MIPR for ground fuel, DFSC contracts with the petroleum industry for each PC&S and publishes a "Contract Bulletin." Contractual coverage for aviation fuel is not published in the bulletin; a separate contract is established for each delivery point. However, some Army aviation fuel requirements are more economically supported by Inter-service Supply Support Agreements (ISSA) with the Air Force or Navy than by contract coverage. The USAPC is the initiating agency for ISSA (AR 700-39) and as such conducts economic studies to evaluate the best supply alternative for support of CONUS Army aviation fuel requirements. USAPC arranges the ISSA with another military department and notifies the supported activity of the supply source.

b. Theater War Reserve Levels (Requirements)

(1) The theater war reserve levels constitute material authorized to be positioned overseas in order to sustain combat operations from D-Day until normal resupply can be provided. Each theater is authorized the necessary days, by class of supply, for each force as prescribed by AR 11-11 which is required for pre-positioning, to accomplish its mission until normal resupply arrives from CONUS.

(2) The USAPC is responsible for computing theater war reserve levels for major overseas Army Commands. The requirement computations for these levels are based on the equipment density data developed by DA. Computed levels are forwarded to the major overseas Army Commands, and upon acceptance constitute the Command's stockage objectives. Detailed cost data relative to these levels are developed by USAPC and forwarded to the USAMC. The theater war reserve levels are computed annually for each major Army Overseas Command. Updates are made semiannually.

c. Mobilization Materiel Requirements (MMR)

(1) The MMR requirements are based on the forces as given in Part 6, Materiel Annex, DA Five-Year Structure (AR 700-6), General War Planning Document. The computed

requirements are forwarded to DFSC. They provide wartime petroleum planning information for use by OSD and JCS. The culmination of the "requirements cycle" is the establishment of supply sources by DFSC contractual coverage or USAPC-initiated ISSA. The PC&S obtains products by direct contact with the supplying activities. During the delivery period, USAPC serves as the sole point of contact for problem resolution between supplier and receiver. These problems include contractor performance requirement changes, and pricing difficulties.

(2) To insure that future requirements submission from PC&S are realistic and to measure accomplishments against programs, a detailed reporting procedure has been established by USAPC and published in AR 700-77. Quarterly progress reports are analyzed to determine if original estimated requirements submitted are in agreement with actual drawdown of contracted quantities. The report also indicates the sales to other-than-Army customers. It is also used by USAPC as a budget estimate feeder report and as feeder data for submission of management data to DFSC and OSD.

d. Special Requirements. Requirements for Army maneuvers and exercises are developed by Logistical Support Commands of an Army area and submitted to USAPC by message and confirmed on DD Form 1149. These requirements are based on exercise scenarios of CINCSSTRIKE and CONARC. The Center provides a POL advisor to plan the petroleum supply of an exercise during the planning session of the exercise. The Center reviews and analyzes the requirements received from the Logistical Support Commands for accuracy. The POL advisor assists the Logistical Support Commands by reconnoitering the petroleum supply points and evaluating the petroleum distribution facilities to support the exercise. USAPC determines the most effective and responsive supply method to meet the objectives of the exercise. MIPRs are placed on DFSC for contractual coverage by USAPC. Upon award of contracts, USAPC places orders with the contractor, utilizing Army stock funds. USAPC diverts requisitions to DFSC for supply of packaged petroleum products and to depots for release of Army stocks due for rotation. USAPC develops storage requirements for storage utilizing, Government-furnished tank cars and transportation requirements for trucks and tank cars and submits these requirements to DTMTS. The USAPC representative serves as a POL advisor on the exercise director's staff and coordinates for all POL movements into the exercise area. The POL advisor directs disposal of excesses from the exercise area upon completion of exercise.

e. Overseas

(1) Initial computation of petroleum requirements for Overseas Commands is performed by USAPC. The basis for this computation is past consumption experience using the existing troop strength to obtain a per gallon per man factor. This factor and forecasted troop strength are used to compute future requirements by military service for ground fuels, i.e., motor gasolines, burner fuels, kerosene, and diesel fuels.

(2) Requirements generated are forwarded to the Unified Commands for further review, corroboration, or revision, and submitted to ensure contractual coverage sufficiently in advance of the required delivery dates. Gross changes proposed by the Overseas Commands are resolved with USAPC, and the updated requirements are submitted to DFSC, using a Military Interdepartmental Purchase Request. This document includes the required quantities by delivery location within the Overseas Command, the product specification, and all other necessary data for contract administration. When applicable, the USAPC makes the final determination as to quality exceptions prior to and after contract award.

The contractual coverage provides open-end contracts for in-country supply or by MSTC cargo liftings against stated requirements.

f. Reserve Requirements. Prior to the computation of any reserve requirements, it is necessary to obtain density for fuel-consuming vehicles, equipment, and aircraft from the appropriate Army Commodity Managers. Consideration must be given to the basic document on which all reserve requirements computations are based. This document is the Mobilization Reserve Stockage List (MOPSL) which contains the combat-essential items authorized for each

major Army Overseas Command and US CONARC. The MORSL serves as the bill of materials for all reserve requirements computations and must be maintained constantly through coordination with the major Overseas Army Command and US CONARC. The responsibilities and procedures followed in MORSL development are included in USAPC Regulation 11-1.

g. Contingency Support Stocks (CONSSTOCS)

(1) CONSSTOCS represents that portion of total war reserves maintained in CONUS for contingency operations. The AMC SOP provides the authority for establishing levels and stockage policies for the contingency requirements.

(2) The USAPC is the Army agency responsible for computing and maintaining CONSSTOC requirements. The CONSSTOC requirements computations are based on the equipment density and strength data of the authorized forces contained in the AMC SOP.

(3) The USAPC establishes the stockage objective for CONSSTOCS and determines the geographical area in which they will be stored. In establishing the storage locations, the USAPC must take into consideration the necessary dispersion required to maintain a constant state of readiness to provide immediate supply to a contingency force worldwide.

(4) The requirements developed by the USAPC are forwarded to DFSC on a MIPR. This completes the requirements segment of the supply management cycle.

4. ARMY STOCK FUND OPERATION

a. Stock funds associated with petroleum products are the Army Stock Fund (POL Appropriation 21X4991, Limitation 6A3) which is controlled by APC, and the Retail Command Stock Funds, which are controlled by major commands and installations wherever applicable.

b. Taken because of hostile action, the only exception to regular procedures is in the procedure for reimbursement through the use of the MACV Bulk Fuels Report. Difficulties in interservice reimbursements were experienced in Southeast Asia and were not effectively resolved until July 1968 when a Memorandum of Understanding was signed by the Budget Directors of each Service agreeing that reimbursement for POL issues in Vietnam would be based on the MACV Monthly Bulk Fuels Report. Since that time, the Army has experienced no difficulties in reimbursement and is satisfied with the present system.

c. Losses have been incurred in varying degrees primarily through enemy action, pilferage, fraud, and lack of documentation. Increased management emphasis such as the installation of meters, use of credit card procedures, sequentially numbering accounting documents, appointing of property administrators, and rewriting regulations to fit each specific area have resulted in an effective accounting system in Southeast Asia. Headquarters, 1st Logistical Command, Vietnam, was established as a central coordinating and monitoring agency which permitted one office to insure coordinated efforts on the part of all units concerned with petroleum management. In Thailand the SAPOTHAI performed essentially the same functions.

d. The civilian-military POL supply system in Southeast Asia was different from any other POL distribution system throughout the Army. Lack of experience, political implications, hostile enemy activities, geographical peculiarities, and lack of storage facilities further complicated an already complex system. Demand data and experience factors were not accumulated during the early stages of operations in Southeast Asia. Procedures and regulations initially were not established for accounting and reimbursement. The extensive use of civilian augmentation to the POL distribution system was necessary and extremely effective.

5. PROCUREMENT

a. The U. S. Army Petroleum Center is the Army activity responsible for performing all Army-assigned functions relative to procurement direction necessary to effect supply of Army petroleum requirements worldwide.

b. Army bulk petroleum requirements are submitted by CONUS Army installations and Overseas Army Commands to the U. S. Army Petroleum Center for supply action. The U. S. Army Petroleum Center analyzes these requirements to determine if the source of supply will be from Army-owned MR stocks, local procurement, DFSC contractual coverage, or by ISSA with another military Service. For DFSC contractual coverage, information or requirements must be submitted to DFSC 5 months in advance of the effective contract data. Therefore, these procurement requirements are forecasting consumption from 8 to 20 months in advance.

c. U. S. Army petroleum requirements are submitted by USAPC to DFSC on a Military Interdepartmental Purchase Request (MIPR), for procurement action. The MIPR specifies user location, mode of delivery, receiving capability, minimum quantities, military specification/purchase description/or proprietary product, and exceptions if any, to MIL-STD-290B. Substantive changes are forwarded to DFSC by amendments to the MIPR.

d. The U. S. Army Petroleum Center develops the requirements for service contracts for commercial bulk and packaged petroleum storage, terminal operations, container filling, maintenance of facilities, and other related functions. These requirements are submitted by the U. S. Army Petroleum Center by MIPR to DFSC for procurement actions.

e. AR 700-9100-5 provides the basis for local procurement. The U. S. Army Petroleum Center is the Army activity responsible for authorizing local procurement of bulk and packaged petroleum fuels when the total amount of the single product does not exceed \$2500.

f. For emergency requirements which exceed the \$2500 limitations, USAPC advises DFSC who assigns a local purchase number for use by the requesting activity. This transaction requires a separate MIPR.

g. Local purchase is normally authorized when the annual requirement for mogas, fuel oil, diesel fuels, jet fuels, kero, dry cleaning solvent and avgas (delivered by TT and/or TC only) is 10,000 gallons or less (per product) at each delivery point. Local purchase is also authorized when the annual requirements for aviation gasolines for tankwagon and drum delivery only do not exceed 60,000 gallons.

h. All inquiries and correspondence from installations and activities pertaining to the status of supply under DSA contracts and bulletins are directed to the Commanding Officer, USAPC, Cameron Station, Alexandria, Virginia.

i. With respect to the establishment of Contract Bulletins for the supply of CONUS post camps and stations, the USAPC acts as a focal point for any problem that might arise.

6. **ARMY RESUPPLY REQUIREMENTS.** Ordering procedures are as shown in Figures A-1 and A-2. Accountability procedures are presently under revision and vary in procedures from unit responsibilities (Sec 3-11, AR 735-35), to those for bulk terminal (as in RVN). Detailed procedures for ordering and POL accounting are set forth in ARs 735-5, 735-11, 735-14, 735-35, 700-9100-5 and 700-80.

7. DISTRIBUTION

a. For post, camp and station operations in the United States, bulk POL requirements are generally distributed by the commercial contractor to the user. Method of distribution to the using activity is determined by the Contracting Officer in comparing the needs and capabilities of the using facilities with the modes of transportation available to ensure the most economical laid-down cost. After the award of the bulletin contract, ordering and delivery arrangements are made between user and contractor.

b. The current POL general support system was designed specifically to support a field army of 12 ROAD divisions using approximately 3,000,000 gallons of bulk fuels products daily. This average daily requirement was derived from guidance for development of current

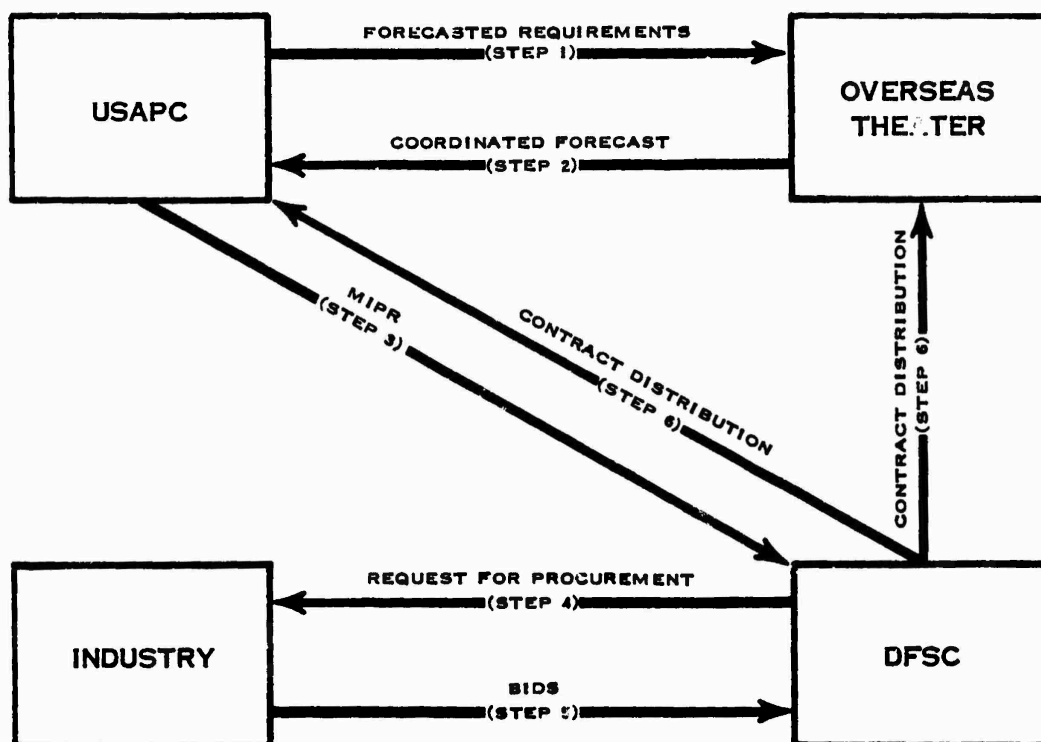


FIGURE A-1. ARMY FLOW OF BULK POL

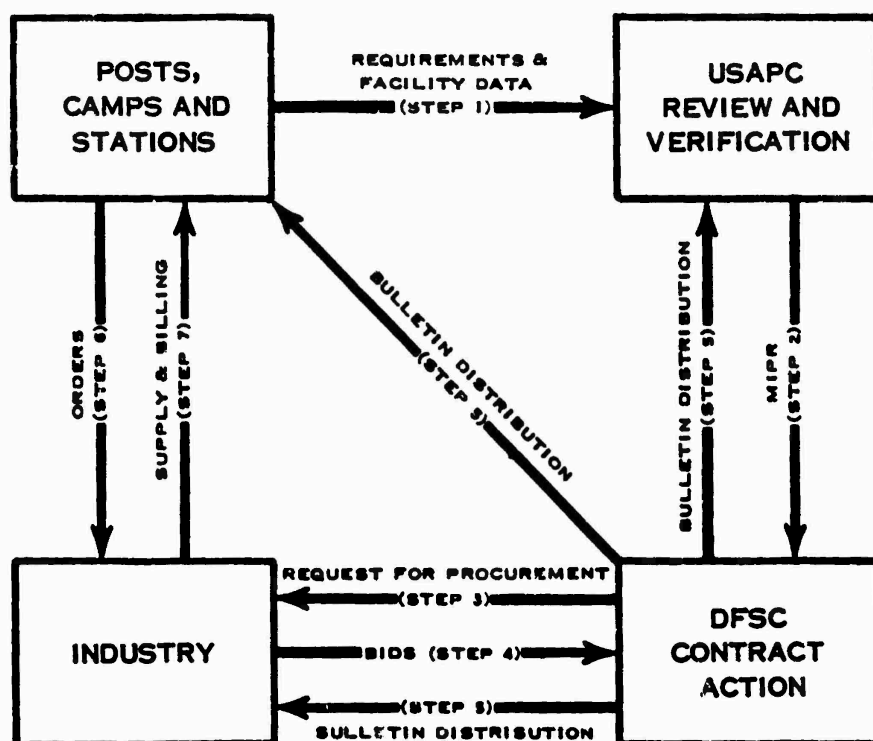


FIGURE A-2. ARMY ORDERING PROCEDURES

units, which provided for a weighted consumption factor of 7 gallons per man per day. COSTAR II (2d revision), USACDC Combat Service Support Group, May 1963, established the general support level of supply at three days (or approximately 9,000,000 gallons). The standard operation of the system in the field is described below; however, modifications are made as required to fit the organizations employed for the tactical situation.

c. The Petroleum Intersectional Command (POLIC) extends its pipeline system to the farthest points practicable in the field army area. When this is done, tankage is erected in the army area to receive and store products flowing through the lines. This tankage represents field army assets, and personnel of the field army petroleum supply companies control the output.

d. Transportation-medium truck companies of petroleum battalions make bulk deliveries from the army-operated facilities as far forward as the situation permits, at least to the supply points operated by the general and direct support groups in the corps areas. Trucks organic to petroleum supply companies deliver to designated direct support units in the army service area and assist in the forward movement of bulk products as required.

e. Petroleum supply companies of supply and service battalions in corps areas operate in support of division support commands and direct support groups. These companies make bulk deliveries to major consuming units, bypassing intermediate storage locations whenever possible. They maintain prescribed stocks for units supported.

8. STORAGE

a. The requirements for tankage throughout the world are contingent upon the requirements for consumption during peacetime operations and anticipated consumption during contingency operations, limited war or general war. Therefore, the starting point in establishing storage requirements is a determination of product requirements.

b. AR 11-11 levels (PWR) are computed by APC using JCS guidance (troop strength) and number of days to be pre-positioned based on resupply schedule determined by DA. These levels are forwarded to Overseas Commands. Peacetime levels, determined by Overseas Commands, are added to arrive at total product requirements. Tankage required is justified through Service channels. Requirements are met by ISSA, commercial leased storage or new construction.

c. The routine peacetime operating stocks within CONUS are readily available from the petroleum industry. As such, there is no central stockage of product to support these peacetime requirements. There is a minor requirement to pre-position some product to meet contingency operations that might be encountered anywhere in the world. The storage requirement is based on the requirement to supply product against the most pessimistic contingency plans. The Army stocks that portion of the requirement that would be needed from the implementation of the plan until the petroleum industry could resupply the required product. Currently, the Army has no Army-operated facility to support this stockage requirement. Annually the requirements are recomputed, and contact is made with the other Services. The other Services provide storage facilities that would otherwise be unused by them. The remainder of the requirement is supported by the leasing of commercial facilities.

9. ACCOUNTING

a. The Army Petroleum Center (APC), Alexandria, Virginia, maintains its accounting required for inventory management on a manual basis. As a manager of a material category of the Army Materiel Stock Fund Division, this office is responsible for preparation and maintenance of required stock fund accounting, reporting, budgeting, and management data as well as the quantitative data required of an inventory control point for requirements, supply, and distribution. This office maintains control of obligations for procurement of product or services, and accounts for mobilization reserve stocks in U. S. terminals.

POL

b. In the stock fund area, APC prepares quarterly, semiannual, and annual stock fund statements, annual apportionment submissions, data for the mid-year apportionment (budget) review, and special studies. It prepares estimated quantitative requirements for others and forwards these to overseas Army commands and Navy and Air Force users for review and comment. APC establishes the value of approved mobilization requirements in the overseas command stock funds, approves invoices for payment to contractors, prepares and forwards vouchers to the DSA Finance Office for payment, establishes the accounts receivable for bulk fuels acquired by this branch and resold to overseas stock fund divisions, and prepares billings to effect collections for stock fund sales. APC consolidates station requirements for ground gas and heating fuels and submits these requirements to DFSC for award of bulletin contracts. The office maintains necessary data and files to perform these and other accounting functions.

c. APC receives quantitative data on selected bulk fuels from overseas locations to prepare bulk fuels reports required for internal inventory management and reports to higher levels.

d. The headquarters which had command stock funds and stock fund management offices, prepared, to a lesser degree, the required stock fund accounting, reporting, and budgeting and supply data as indicated above for APC. These home offices maintained controls, records, and procedures for assigned functions.

e. Terminals prepare bulk terminal inventory reports for each product and each military department showing receipts, issues, adjustments, losses, and beginning and ending inventory balances. These reports are forwarded to the accountable office where they are price extended and the values are entered into the financial inventory accounts. Transaction documents supporting the entries accompany the report and are used by the accountable office in establishing sales, transfers, and receipts. Terminals overseas frequently store and handle products for other departments. The overseas commanders and component command operators have effected numerous overseas supply support agreements to minimize any duplication for terminal storage operations.

f. An Army Command Stock Fund Division for each major overseas command (except Southeast Asia) is billed by the contractor for direct deliveries to a post, base, or station in the command. These products are held as stock fund inventories and stratified as to mobilization reserve or peacetime stock. On issue to user, the stock fund is reimbursed.

g. Procurement costs of direct deliveries from contractors to user activities in Southeast Asia are billed by the contractor to the Army Petroleum Center Branch, Army Materiel Command Stock Fund, to relieve the combat command of accounting and reporting. After payment to the contractor, the AMC stock fund bills the Army Operation and Maintenance Appropriation (O&MA) held by the U.S. Army Pacific Command (USARPAC), Honolulu, Hawaii, for MACV.

h. The Army does not utilize the U.S. Army Pacific Stock Fund Division to finance the acquisition of bulk petroleum products for MACV, although this stock fund division is used to finance bulk petroleum products for the other locations in the Pacific Command. Reimbursable issues in the Republic of Vietnam to other component commands or customers should be credited to the operation and maintenance appropriations held by the Comptroller, USARPAC at Honolulu, Hawaii. Accounting for these reimbursable issues has not been completed since end-use issue documents have not been prepared, summarized, and forwarded from MACV to the Comptroller, USARPAC.

i. In Vietnam, the Army has attempted to account for Air Force aviation fuels in Army terminals by preparing the Air Force monthly terminal stock fund report, HAF 73. This report summarizes all monthly receipts, issues, adjustments, opening balances, and required support with a copy of each receipt, issue, adjustment, and other inventory transaction documents. It is a good inventory accounting report for trained personnel to prepare at fixed stations.

10. PETROLEUM MANAGEMENT IN THE NAVY

a. CNO. CNO petroleum staff functions are accomplished by the Fuels Branch under VCNO Logistics. The Fuels Branch is responsible for development and dissemination of policy and guidance on all matters of petroleum and is the fuel coordinator for CNO on the petroleum portion of all matters within the Department of Navy. Petroleum management policy guidance from CNO is decentralized--going to the Chief of Naval Material for material management and to the respective Fleet/Force commanders for the operational element of management.

b. Fleet. Fleet commanders task their principal logistic agents, the component Service Force, to develop guidance for the fleet and individual activities within the area. This guidance includes stockage objectives, funding programs, maintenance of inventory levels, equipments, and replenishment of any other logistical element associated with operational management.

c. Naval Material Command. Naval Material Command endorses CNO policy and guidance to the appropriate systems commands, and provides funds to and reviews budget submissions from each of the systems commands.

d. Naval Supply Systems Command. The Naval Supply Systems Command interprets the policy and guidance received from CNO/CNM and issues instructions to the cognizant inventory control points. NAVSUP reviews budget submissions and mobilization reserve requirements and exercises surveillance over maintenance of inventories.

e. Navy Fuel Supply Office. The Navy Fuel Supply Office is a field of activity of NAVSUP and receives all funding, manpower authorizations, and command guidance from NAVSUP. In addition, the CO of NFSO acts as the fuel advisor to the Commander, NAVSUP. The functional tasks of NFSO are contained in NAVSUP INST 5450.29D of 17 November 1966. In general, those tasks include budgetary, storage, replenishment, and inventory management controls based on POS- and PWRS-level computations; procurement inspection for petroleum products in accordance with NAVMATINST 4355.61; and technical assistance for Navy POL on a worldwide basis.

f. NFSO has an interface with CNO in its role of computation of PWRS and POS levels. After computation, CNO sends out the levels to the Navy commanders for review and comment before the levels are published in an OPNAV Instruction. Thereafter NFSO monitors the levels for CNO. NFSO also provides guidance and staff studies on the technical aspects and physical facilities of the Navy POL logistic structure.

g. NFSO receives requirements annually from field activities. The normal bulk product requirements are given to DFSC to provide the Navy portion of the worldwide DOD annual fuel procurement(s). In the case of into-plane requirements, these are given to SAAMA to be consolidated with other service needs and submitted by SAAMA to DFSC.

h. Area commanders provide the requirements for worldwide bunkering needs. In addition, NFSO keeps issue records on periodic bunkerings provided by local purchase authorizations. When such local purchase bunkerings warrant, NFSO will include these with requested requirements and submit the total to DFSC.

i. Annual sales estimates are prepared by NAVSHIPS and NAVAIR. These figures are compared with historical data to provide the input for the annual NFS budget. NFSO prepares the budget and submits it to NAVSUP and NAVCOMP for review before submission to BOB. NFSO provides sub-allotments to those wholesale activities under project 23, while FMSO provides sub-allotments to retail activities under project 96.

j. NFSO provides technical guidance, directs quality surveillance programs, and provides technical assistance teams to any operational element.

11. REQUIREMENTS. The initial requirements for bulk POL in the Navy are computed and positioned through the operational chain of commands and are composed of two elements: Pre-positioned War Reserve Stocks and Peacetime Operating Stocks.

a. Pre-Positioned War Reserve Stocks

(1) Pre-Positioned War Reserve Stocks are computed from the approved force levels and positioned in the geographical area of anticipated use in the quantities outlined in the JCS Logistics Guidance. The command elements involved in this determination are the Office of the Chief of Naval Operations, the Inventory Control Point, the Commanders Atlantic and Pacific Fleets, and their principal logistic agents--the Service Force Commanders.

(2) After the computations are made, the fleet reviews the levels and CNO promulgates the PWRS levels that should be maintained in each area. The Service Force commanders assign these quantities to a specific activity within the overseas area; NFSO assigns quantities to CONUS stocking activities. If sufficient storage is not available within the area, one or more of the following takes place: (a) stocks are assigned to the nearest Navy activity with excess storage, (b) excess storage from another service is obtained, (c) construction program is initiated, and/or (d) commercial storage is leased.

b. Peacetime Operating Stocks. The Peacetime Operating Stocks (POS) are individually determined for each major activity and are of an amount sufficient to sustain operations during the interval between regular resupply. The quantity assigned an activity depends upon the most economical method of resupply (tanker barge, tank truck, pipeline, etc.) and facility characteristics (water depth, quantity of storage for each product, and usage rates), plus a transportation delay factor where applicable. Quantities of storage in excess to POS may be used for assignment of PWRS. All stocks in the area of combat operations become operating stocks.

12. NAVY STOCK FUNDING MANAGEMENT

a. Each Service has a stock fund to provide for bulk fuels. No two Service stock funds are exactly alike, but the method determining the amount of funds needed follows the same basic procedure. The past usage, compared to projected flying hours, steaming hours and other operating equipment, planned inventory changes as well as product conversion are all analyzed to provide the basis for the Annual Fiscal Fuel Budget. The stock fund budget is formally reviewed quarterly to ensure that the forecasted and actual budgets coincide as time progresses.

b. The Navy Stock Fund, Subhead 2310, Project 23, finances the purchase and maintenance of petroleum supply items required for support and operations of the Navy and for stockage of POS and PWRS inventories. Except for minor exceptions, purchases are funded under the Navy Stock Fund Project 23 and carried in the inventory pending issue to the end-user or held in stock in support of POS and PWRS levels. The system requires financial inventory reporting by each accountable activity of receipts, price and accounting adjustments, gains and losses, issues, cash sales, transfers, and closing inventory by product identification codes to NFSO.

c. Activities authorized to order products from a supplier request allotments from NFSO Navy activities who are accountable for stocks in their custody and responsible for billing and collecting for all issues made from their stocks.

13. NAVY PROCUREMENT

a. Generally, contracts for a specific bulk product are made every 6 months. To spread the workload, the contract dates for the various products are staggered. The Service Inventory Control Points compute the needed quantities of a bulk product to fulfill the usage requirements, tank fills less any planned drawdown. These procurement requirements not only show the amounts for each activity, but the various modes that the product can be received in and any special problems at any specific activity. Major factors used to establish procurement requirements include

personnel, equipment, and weapons system utilization as limited by budgetary controls. This information gives the buyer and the seller all possible options that can be used in furnishing product to a given location. Included also is information concerning support through other military activities.

b. Procurement requirements must be compiled and submitted by the Inventory Control Points to the Defense Fuel Supply Center 5 months in advance of the contract effective date. Therefore, the procurement requirements forecast consumption from 8 to 20 months in advance. From this computation, contracts are made to provide the resupply requirements during the contract period.

c. Procurement requirements are determined, consolidated and/or coordinated by NFSO. Established procurement requirements are forwarded to DFSC for contractual action on MIPRs. Methods of procurement requirement determination are:

(1) CONUS Terminals. NFSO determines annual procurement requirements to support fleet and shore operations using historical usage data, listing of equipment, ships, aircraft to be supported at a particular location, BLFR reports submitted in accordance with NAVFUELSUPOINST 4440.6D, and other pertinent information developed or requested. Activities submit weekly and/or monthly reports for management control and contract administration purposes.

(2) CONUS Navy Stations. Navy activities listed in areas covered by DFSC regional contract bulletins submit procurement requirements direct to DFSC for contractual action. Procurement requirements for POL items in the East and West Coast Marine Contract Bulletin, bunker items for vessels in the Great Lakes, and requirements for activities in Puerto Rico, the Virgin Islands, and those listed in the Hawaiian Islands Contract Bulletin are developed by NFSO using historical usage data, force plans, operational schedules, and other pertinent information developed or requested. Activities submit monthly reports for management control and contract administration purposes.

(3) Offshore Terminals/Stations. Unified commanders are requested to forward procurement requirements to NFSO. Requirements are reviewed using historical data, BLFR reports submitted in accordance with NAVFUELSUPOINST 4440.6D, and other pertinent information developed or requested. Activities submit weekly and/or monthly reports for management control and contract administration purposes.

(4) Worldwide Bunker Requirements. Requirements are developed by NFSO in conjunction with input from fleet commanders. One-time or spot-bunkering requirements are submitted by requesting afloat command direct to NFSO for appropriate contractual coverage.

(5) Into-Plane Requirements. Requirements are developed by the NFSO based on current usage data, contractor's statements, letter requests received from requiring activities, and any other known or anticipated requirements based on information generated by or made available to NFSO.

14. NAVY RESUPPLY. Each activity submits resupply requirements to reconstitute the usage of assigned POS before exhausting stocks or using any of the PWRS.

a. Overseas

(1) Each overseas activity submits monthly its resupply requirements as slates to the Sub-Area Petroleum Officer (unified command) for a current month and a 4-month projection of resupply requirements, updating more frequently if requirements (substantially) change. The Sub-Area Petroleum Officer consolidates all activity requirements for his area and submits them to the Joint Petroleum Office. The requirements are monitored by the Service force commanders to identify changes which may be required to support planned operations. The Unified Command area resupply requirements are then forwarded to the Defense

Fuel Supply Center to arrange for delivery of the resupply quantities. At the same time, the resupply requirements are forwarded to the Service commands (c/o the principal logistics agents--in the Navy, the Service Forces) and the Inventory Control Points (Figure A-3).

(2) The Defense Fuel Supply Center and the Service Inventory Control Points match the resupply requirements with contract coverage. Sometimes stocks need rotating, and military-owned product is used. The Military Sea Transportation Service is constantly advised, and tankers are requested to deliver the product. The requirements on the slate that are to be filled within the next 60 days are considered firm, and tanker assignment and product orders are made. Information on tanker assignments and the quantities of product being lifted are provided to both the Service and unified channels. The Services only become actively involved in the resupply cycle when changes are required, i. e., management by exceptions for such things as tanks out-of-commission, contaminated product, or radical changes in operations.

b. CONUS. In CONUS, for the main terminals, resupply is initiated by the Inventory Control Point as a result of stock status reports submitted by the terminals (Figure A-4). Overseas and in CONUS, when resupply is from FOB destination contracts, the local activity initiates the resupply action.

15. DISTRIBUTION

a. The distribution of bulk POL from commercial source to first destination is determined first by the physical capabilities of the receiving activity and second, by the selection of source and mode of transportation by the contracting officer. Determination of source and method of transportation is primarily based on economy, i. e., cost of product at source plus cost of transportation to first destination.

b. To a degree, the Navy utilizes every element of POL distribution equipment. The Navy petroleum distribution systems include a bulk fuel terminal system, the station aviation fuel system, into-plane contract system, standard shore and marine fuel system, underway replenishment of ships by fleet oilers, assault bulk fuel systems, tactical airfield dispensing systems, and, to a minor extent, some pipeline and tank truck system operations. Adequate storage and a close relationship between the Navy supply and operating elements are essential in ensuring maximum efficiency of distribution. Mechanics of resupply are as follows:

(1) CONUS terminals and tanker movement resupply requirements are determined by NFSO for the current month plus 3 succeeding months and forwarded to DFSC.

(2) CONUS terminal, pipeline, and barge resupply movements are determined by terminal personnel and monitored by NFSO.

(3) CONUS, Alaska, and Hawaii Navy stations resupply requirements are determined and ordered against regional contract bulletins by individual activities.

(4) Offshore terminals tanker movement resupply requirements are determined locally and submitted to DFSC via the JPO slate procedure with the ICP and operational chain monitoring to ensure maintenance of levels and to take action on an exception basis.

16. NAVY STORAGE. The sum of the PWRR and POS gives the product stock objective. An additional 10 percent is added to compensate for inaccessible product in tank bottoms, pipeline fill, and tanks inoperative for cleaning and repair. Therefore, the bulk storage requirement is 110 percent of the product stock objective (POS & PWRR), located in the area of anticipated use.

17. ACCOUNTING

a. The Navy Fuels Supply Office (NFSO), Alexandria, Virginia, acts as the stock fund manager and inventory control point for bulk petroleum and packaged petroleum products carried in the Navy stock fund overseas. It is also the principal office in support of

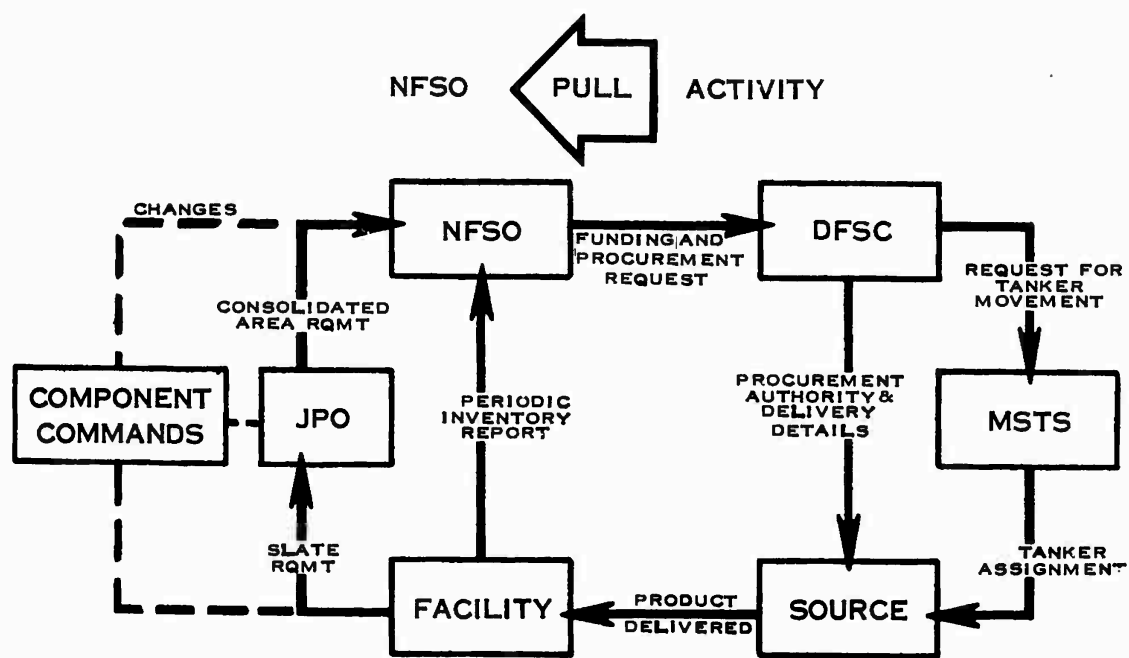


FIGURE A-3. MAINTENANCE OF APPROVED LEVEL-OVERSEAS POL SUPPLY (NAVY)

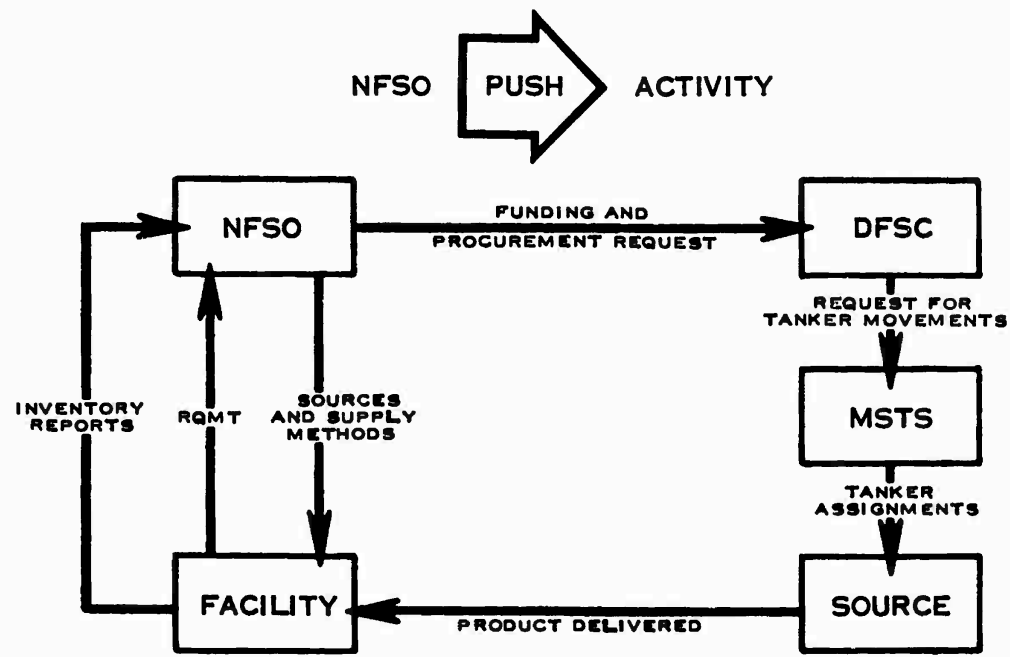


FIGURE A-4. MAINTENANCE OF APPROVED LEVEL-CONUS POL SUPPLY (NAVY)

the Supply Systems Command and the Navy Material Command on matters pertaining to fuels. It develops procedures and standards for petroleum fuels handling which facilitate inventory management.

b. The Navy operates a standard supply and accounting system for material in the Navy stock fund. Receipts, sales, and adjustment transactions are reported by category (cognizance symbol) and materiel control code which identifies the major bulk fuels by the accountable activity to the Navy finance and accounting offices and NFSO. These transactions are summarized through the accounting system operated by the Navy Comptroller and Supply System Command and reported in financial terms to the cognizant inventory manager and Supply Systems Command. The Navy Finance Center, Washington, provides disbursing and collection services for NFSO.

c. As a category stock fund manager, NFSO utilizes Navy accounting data with other required information such as physical inventory statements to prepare stock fund statements, trial balances, and reports. NFSO prepares and defends apportionment (budget) requests for bulk fuels and participates in mid-year review to ensure that sales, purchases, and inventories were in balance. It computes Navy mobilization and peacetime requirements and reviews these with principal users in the Navy. After approval by higher authority, these requirements are reflected in stock fund budgets and operations.

d. NFSO maintains control over obligations for procurement orders issued for bulk products by the Navy stock fund (project 23), receives delivery reports from contractors, performs reconciliation of all cargo deliveries, and requests the Navy Finance Center (NFC) to prepare any necessary bills. NFSO receives billings from the Army and Air Force for bulk petroleum and processes them for payment.

e. When a local Navy activity is not available, NFSO adopts the procedure of direct billing to user end-use appropriations for delivery from commercial contractors to using equipment wherever feasible. For example, this office compiles requirements for commercial bunkering of ships each year. After the contracts are awarded by DFSC, NFSO advises the commander of the fleets to obtain commercial bunkering by direct charge for products received under these contracts. These types of procurement reduced inventory accounting and reporting.

f. NFSO performs internal accounting by manual methods. It receives hard copies from field activities. In preparing the quantitative bulk fuels and financial inventory reports, NFSO punches cards from hard-copy reports and forwards these punch cards to the Navy Information Center, Pentagon, Washington, D. C., for preparation of consolidated quantitative and financial bulk fuels reports.

g. Terminals prepare bulk terminals reports and forward the same to the Navy accountable activity with supporting documents where financial accounting is established and entered into the Navy accounting system. Terminals also prepare a bulk report weekly and submit it to NFSO for utilization in ordering deliveries to terminals, ascertaining status of mobilization reserve inventories, stratifying inventory, and other supply management operations.

h. In the Military Assistance Command, Vietnam (MACV), the Navy, as well as other Services, has difficulty in obtaining end-use issue documents. These documents are required under normal stock-funding accounting to charge the customer for deliveries. The Navy operates terminals, storing products for each department in the northern I CTZ area. When aviation fuels are received in a Navy terminal, prior to being shipped to an air base, the Navy stock fund purchases the fuels from the Air Force stock fund. MACV stock fund transactions are reported to the Navy Regional Accounting Office, San Diego, which performs the accounting for the branch office of the fund in the Republic of Vietnam.

18. PETROLEUM MANAGEMENT IN THE AIR FORCE. Petroleum Management in the Air Force is exercised at each principal level of command from Headquarters, U. S. Air Force, down to base level (Figure A-5).

a. Headquarters, U. S. Air Force. The Fuels Branch at the Headquarters, U. S. Air Force level is under the Deputy Chief of Staff Systems and Logistics. The Fuels Branch formulates policy, furnishes guidance, and exercises staff supply management for matters pertaining to fuels, oils, lubricants, propellants, chemicals, gases and coal.

b. Major Air Command. At the major air command level the responsibility for petroleum management is divided, at the discretion of the Commander. Generally, ground petroleum products which are in the General Support Division of the Air Force Stock Fund are managed by the Supply Systems Management Division, and aviation and missile petroleum products and liquid cryogenics, which are in the Fuels Division of the Air Force Stock Fund, are managed by the Fuels Management Division. These divisions are responsible to the Command Directorate for Supply for staff management of aircraft, missile, and ground fuel products; liquid cryogenics and gaseous product operations; war planning; and facilities and related equipment.

c. Air Force Logistics Command

(1) In addition to the operational command petroleum responsibilities listed above, the Air Force Logistics Command (AFLC) is tasked to provide logistics support and services for USAF organizations, systems, and other activities worldwide. (See Figures A-6 and A-7.) In the area of petroleum logistics, these responsibilities are to:

(a) Develop and implement supply systems and procedures for worldwide Air Force logistical support, regardless of the supply source of items.

(b) Conduct industrial mobilization planning.

(c) Develop and implement plans and procedures for automation of data handling throughout the Air Force logistics support system.

(d) Operate the Air Force Petroleum and Chemical Laboratories and perform procurement inspection of Defense Fuel Supply Center contracts in overseas areas.

(e) Manage the Fuels and General Support Divisions of the Air Force Stock Fund.

(f) Develop, publish and distribute procedures for implementing USAF supply management policy.

(2) The responsibilities of AFLC as they pertain to the Fuels Division of the Air Force Stock Fund consist of material management in three categories: Aviation Fuels; Missile Fuels; and Herbicides. Functions pertaining to these responsibilities are performed by the following activities under the San Antonio Air Materiel Command: The Director of Aerospace Fuels at Kelly AFB, Texas; the AF Aerospace Fuels Petroleum Supply Office, Detachment 29, at Cameron Station, Alexandria, Virginia; and five CONUS AF Aerospace Fuels Field Offices. These activities accomplish management and operational surveillance over the Air Force-wide petroleum products budget, procurement, storage, requirements, quality control, distribution, financial and property accounting, stock control, and cataloging.

d. Base Fuels Management Officer. The Base Fuels Management Officer (Figure A-8) is accountable for and maintains the Air Force Petroleum Stock Record Account at base level in addition to the following: requisition and control of the receipt, storage, and issue of bulk fuels, propellants, and chemicals; management and control of fuel handling equipment, personnel, and facilities; operation of liquid and gaseous oxygen- and nitrogen-generating

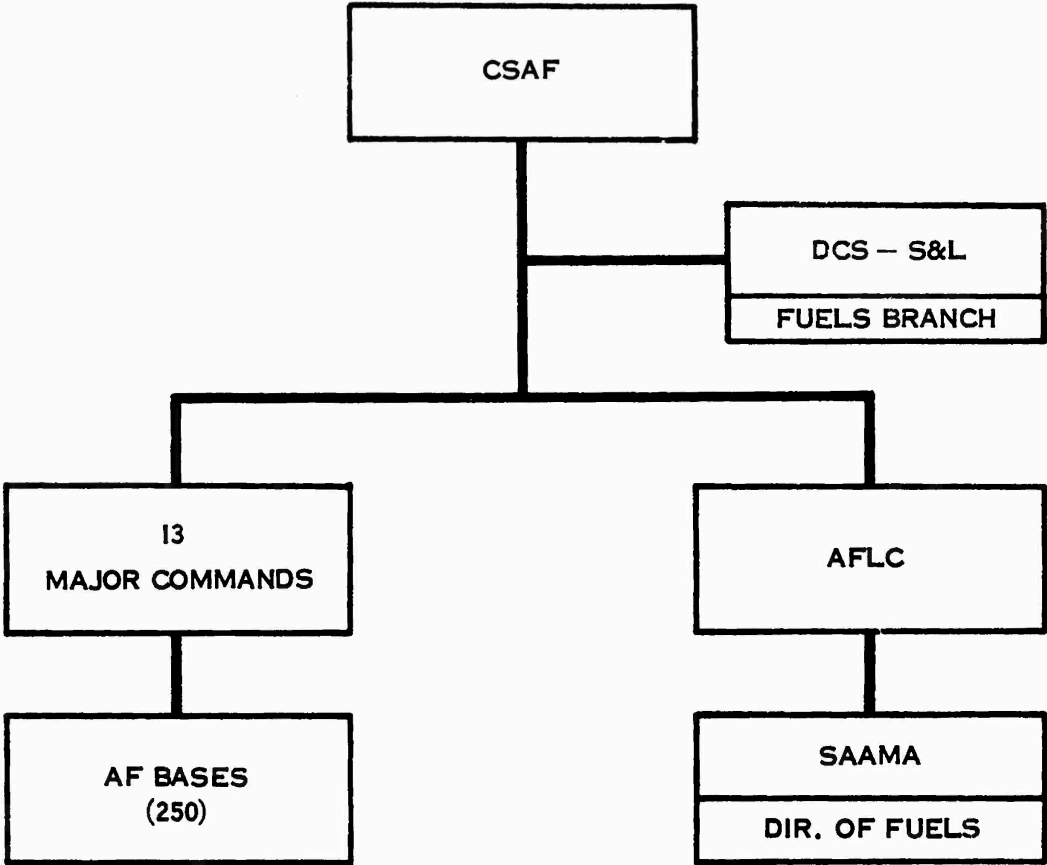


FIGURE A-5. AIR FORCE PETROLEUM ORGANIZATION STRUCTURE

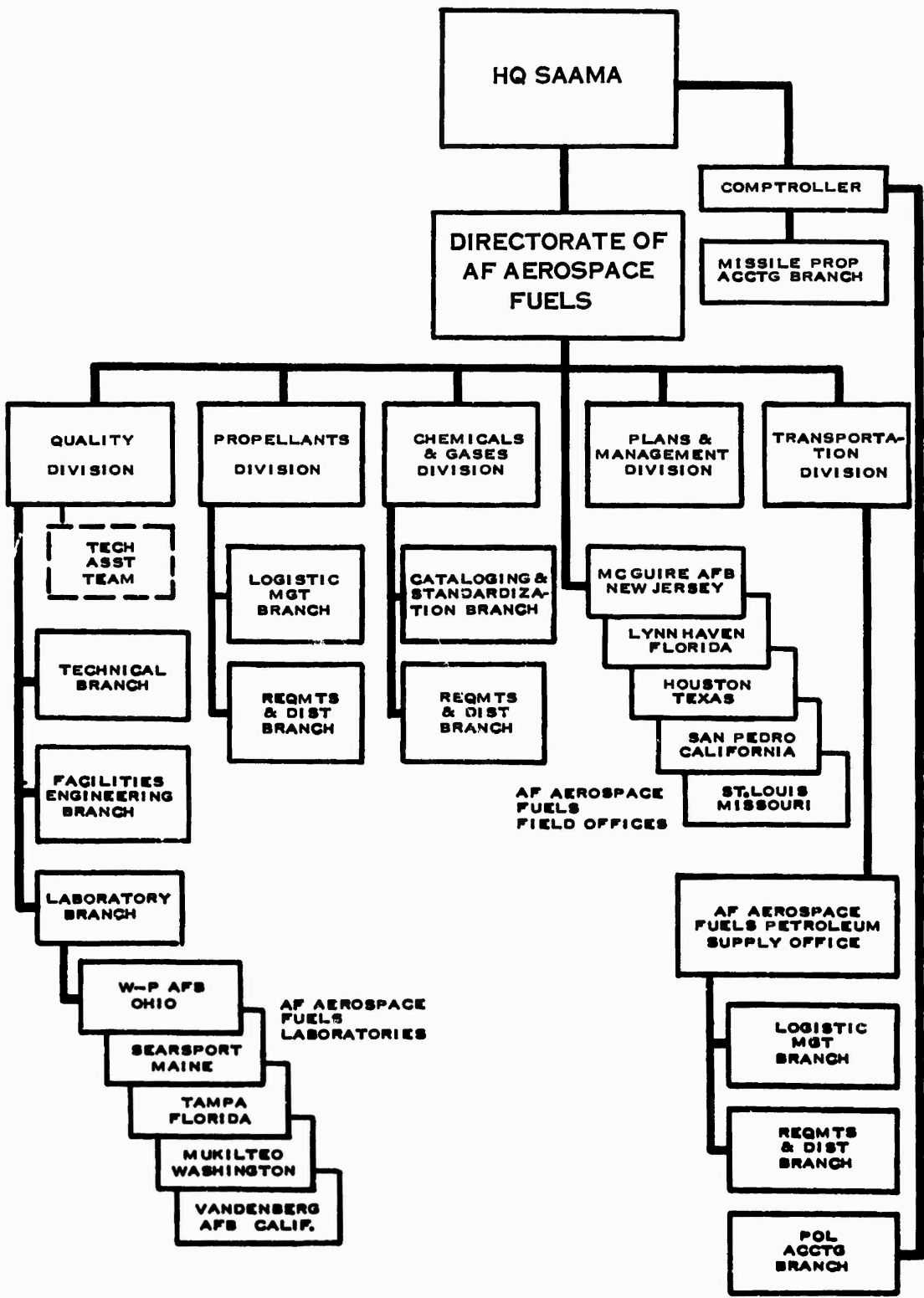


FIGURE A-6. AIR FORCE POL INVENTORY CONTROL POINT ORGANIZATION

DETACHMENT 29, HEADQUARTERS SAAMA ORGANIZATION

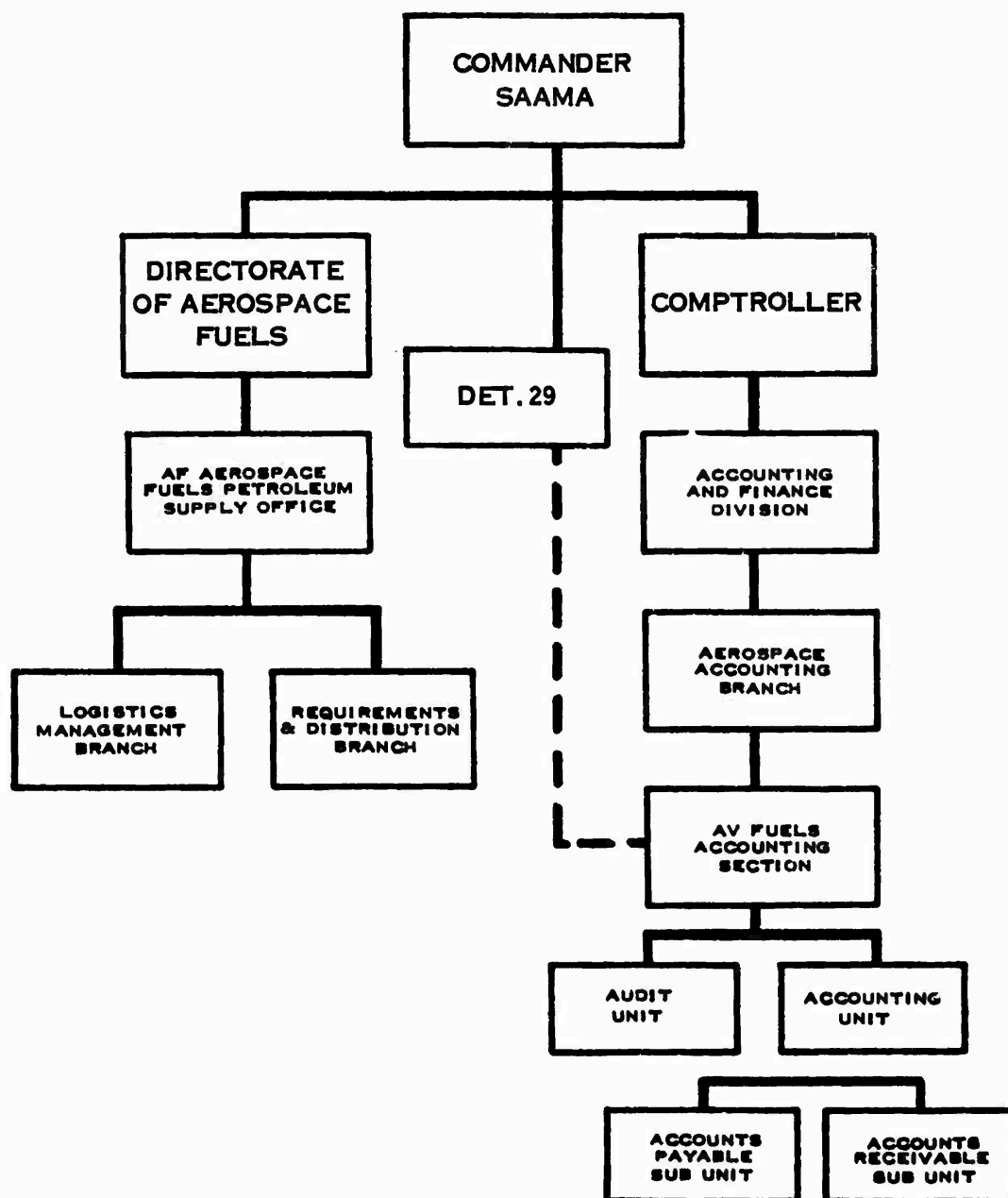
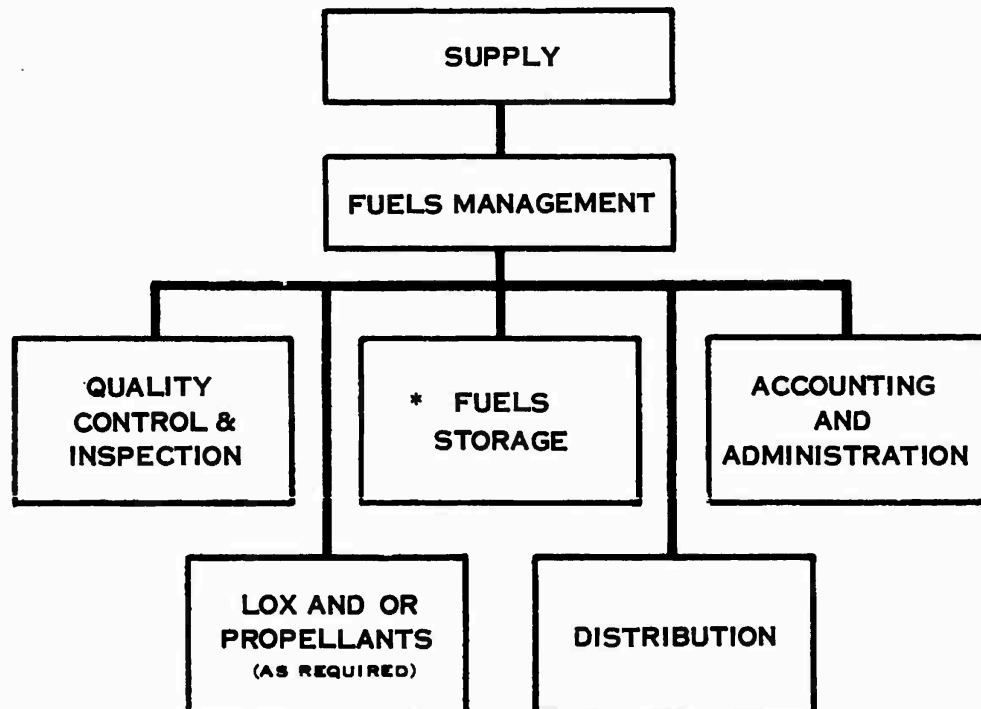


FIGURE A-7. AIR FORCE POL INVENTORY CONTROL POINT ORGANIZATION (DETACHMENT 29)



*INCLUDES AVIATION FUEL AND OIL AND THOSE GROUND PRODUCTS SPECIFICALLY OUTLINED IN AFM 67-1.

FIGURE A-8. BASE FUELS MANAGEMENT OFFICE (AIR FORCE)

plants at installations outside CONUS; and the maintenance of quality control of products while under his control.

19. **AIR FORCE REQUIREMENTS.** The initial requirements for bulk POL in the Air Force is composed of two types of requirements - War Reserve requirements and peacetime operating supply requirements.

a. **War Reserve Stocks**

(1) The War Reserve requirements for aviation fuels are determined from two documents published by Headquarters, U. S. Air Force. The first, AFR 67-44, provides general guidance and specifies the number of days support that will be provided in CONUS and overseas by geographical area. The second is the USAF War and Mobilization Plan (WMP) documents that gives aircraft activity at each operating location by type aircraft and fuel per landing. The data in the WMP documents are mechanized and card decks are furnished the Air Force Logistics Command (AFLC). AFLC considers the number of days supply required in each geographical area and produces a mechanized tabulation of worldwide POL War Reserve requirements by individual locations where operations are to be conducted. This mechanized tabulation is given to the Directorate of Air Force Aerospace Fuels (SAAMA) which, as the Air Force POL Inventory Control Point, is responsible for the maintenance of War Reserve stocks of aviation fuels worldwide. The Director of Air Force Aerospace Fuels adjusts the quantity of War Reserve stocks that will be pre-positioned, based on peacetime force materiel and available tankage required, to reflect the additional support furnished to or received from other Services through Interservice Supply Support Agreements and informs the major air commands of the War Reserve stocks that are to be located at their bases. When the complete War Reserve requirement cannot be stored at the base of intended use, the Director of

Air Force Aerospace Fuels arranges, in coordination with the major air commands, to store the remaining War Reserve stocks as near as possible to the base of intended use. Excess storage of other Services, leased commercial storage, and military construction projects are normally used to provide storage capability in deficient areas.

(2) The determination of War Reserve requirements for ground petroleum products is a responsibility of the major air commands. In computing such requirements, the commands are guided by policy direction from Headquarters, U. S. Air Force. AFR 67-44 gives general guidance and specifies the number of days of War Reserve stocks to be maintained. The major air commands utilize consumption factors, in the form of gallons or pounds per man per day, for various geographical areas as published in a USAF Cost and Planning Factors Manual, AFM 172-3, and the wartime personnel strengths provided in the USAF WMP document, in computing their War Reserve requirements and assume the responsibility for budgeting and the programming for their acquisition.

b. Peacetime Operating Stocks. Peacetime operating levels of supply requirements for aviation fuels are computed by using a standard formula which is outlined in AFM 67-1. Factors considered in this formula include such items as daily demand rate, pipeline time quantity, safety level, economic resupply quantities, floating storage, closed port installations, pipeline fill, unusual temporary demands, and flying hour programs. When the peacetime operating level of supply at an installation is computed to be less than 5 days, a minimum 5-day level is automatically established; overseas installation levels for the nine principal areas vary from 15 to 90 days, and the levels at the 11 closed port installations vary from 150 to 360 days. These latter two variables are based on resupply time and the period of time that different ports are expected to be closed during any 1-year period.

20. AIR FORCE STOCK FUND. Petroleum products in the Air Force are funded by two divisions of the Air Force Stock Fund. Aviation fuels and oils are funded by Aviation Fuels Category of the Fuels Division and ground fuels are funded by the General Support Division.

a. Aviation Fuels

(1) The Aviation Fuels Category operates as a true revolving fund with management maintained under the Inventory and Capital Control System. This system provides worldwide positive control on inventory on hand, inventory in transit, material on order; and the aggregate of these three elements. The policy for management by this method relieves the Fuels Division from apportionment and places emphasis on the management of the above elements, rather than on procurement programs. The Fuels Division provides for the sale of aviation fuels and oils to consuming equipment worldwide and the stockage of inventories (War Reserve and peacetime operating) and levels to support the approved flying and nonflying missions of the Air Force.

(2) The Director of Air Force Aerospace Fuels computes and submits proposed operating programs and operating budgets for the forthcoming fiscal year which outline the requirements for each element by month that are necessary to support the worldwide flying and nonflying requirements, sales to other-than-USAF customers and inventory objectives. Upon approval at Headquarters, U. S. Air Force, the operating programs are used by the Director of Air Force Aerospace Fuels to manage all aspects of the Air Force Aviation Fuels program. These programs are reviewed monthly by the inventory manager to determine if operations are within the prescribed limits, and quarterly reports are submitted to Headquarters, U. S. Air Force. During these reviews, when it is determined that the inventory on hand and aggregate of the inventory on hand, inventory in transit, and materiel on order are within plus or minus 10 percent of the approved program, no special management action on the part of the inventory manager is required. However, when these limits are exceeded, the inventory manager determines the reasons for such variance, and all aspects of the operation are analyzed to determine corrective action required.

b. Ground Fuels and Oils. For ground fuels and oils under the General Support Division of the Air Force Stock Fund, each base prepares an Operating Program which is submitted to the major air command. These programs are consolidated into a Command Operating Program and forwarded to the Air Force Logistics Command (AFLC), which manages the overall General Support Division of the Air Force Stock Fund.

c. Budgeting. AFLC prepares and forwards to Headquarters, U. S. Air Force an annual overall Air Force Budget Estimate and an Operating Budget which include an Operating Program for each month of the current and budget fiscal years. When these programs are approved, AFLC provides operating programs to each level of management through the major commands. Within the limitations of the approved programs, bases fund product orders at the time they are placed. AFLC monitors operations under the General Support Division, by monthly reports, in the same manner as for the Aviation Fuels Division. The General Support Division is reimbursed at the time the product is released to using activities.

21. AIR FORCE PROCUREMENT

a. Procurement of bulk fuels and oils is normally made by DFSC on 6- and 12-month contracts. Some procurement is also made from a long-term contract generally identified as the Evergreen Contract. The Air Force Inventory Control Point is the only Air Force activity authorized to submit purchase requests to DFSC. These procurement requirements for products that are purchased on 1-year contracts, when computed at the lowest level of operation, are normally submitted 7 to 8 months in advance of the contract period and represent projections or forecasts of consumption for a period of 8 to 20 months in the future. For products purchased on a semiannual basis, these forecasts are for a period of 8 to 14 months in the future.

b. The aviation fuels procurement requirements for CONUS installations are developed by the Air Force Fuels Field Offices for activities in their geographical area of responsibility. Factors and data used by these agencies in establishing procurement requirements include current and programmed aircraft by station; mission and design; Flying Hour Program; standard consumption factors; obligations under Interservice Supply Support Agreements; support of Charter and Contract Carriers; past issue data; and the receiving capabilities by modes at each installation.

c. The procurement requirements established by the Field Offices and the major air commands are reviewed, modified as required, and consolidated by Detachment 29 into Buyers Guides and submitted to DFSC for procurement actions. Detachment 29 also establishes procurement requirements for all into-plane fuel and oil servicing contracts for all Services and governmental agencies worldwide. The quantities to be placed on Contract are based on requirements submitted by supported activities, and experience, from previous contracts and direct purchases made with AF Form 15's. Procurement requirements for ground petroleum products are initiated by each CONUS installation and submitted to its major command for review, approval, consolidation, and submission to Detachment 29 for procurement action by DFSC.

22. AIR FORCE RESUPPLY

a. Tank Truck and Tank Car. All resupply requirements for delivery to using activities by tank car or tank truck are determined by the using activity based on projected consumption and planned changes to base inventories.

b. Tankers. Resupply requirements for delivery by tankers are determined by the following organizations, based on projected consumption and planned changes to area inventories and are scheduled to insure arrival before the on-hand peacetime stocks are exhausted.

(1) Overseas Area — by slating actions through the JPO/SAPO organizations in collaboration with using activities; the processing, coordination, and actions of slated requirements are generally the same as outlined in the Navy Resupply Requirements.

(2) CONUS — by the Air Force Fuel Field Offices.

c. Pipeline. Resupply requirements for delivery by pipeline and barge are determined by the following organizations based on projected consumption and planned changes to inventories at specific locations and are scheduled to ensure arrival before the on-hand peacetime stock at these locations are exhausted.

(1) Overseas Areas — normally performed by the organization that operates the terminal which receives the shipment. In some cases the ordering is accomplished by the JPO/SAPO organization. The ordering in all cases is as authorized by the Air Force Contract Monitoring Point on a Distribution Plan.

(2) CONUS — by the Air Force Fuel Field Offices.

d. POL Distribution in the Air Force. All methods of distribution are employed by the Air Force to arrange for the delivery of petroleum products to consuming equipment. The degree of management that the Air Force exercises in the distribution is primarily determined by the FOB point and modes of transportation specified in the supply contract. Frequently, the first destination specified in the supply contract is not always the activity or equipment that will ultimately consume the product. Therefore further distribution of fuels requires specific actions on the part of the Fuels Field Offices and Contract Monitoring Points.

(1) The industry direct-into-consuming-equipment method of delivery such as into-plane servicing at commercial airports and vehicle servicing at commercial service stations does not normally require any management action, from a distribution standpoint, by the Air Force except when the product is Government-furnished. When this type of contractual arrangement is used, the supplier will service into authorized equipment the specified product upon demand of the operator. Unit cost on contracts of this type include servicing charges. Organizations receiving ground products in this manner are billed direct by the supplier, and payments are made from base level. Aviation products received by all Government agencies, except the Navy, from into-plane contracts are billed to San Antonio Air Materiel Area.

(2) For all other methods of distribution used in the process of getting bulk aviation fuels from the refinery to the point of intended use involves actions that must be taken by the AF Aerospace Fuels Petroleum Supply Office (Det 29), the CONUS Fuels Field Offices or Contract Monitoring Points (CMP). Management and control of the amount of fuel lifted from indefinite quantity-type contracts are exercised through the use of Distribution Plan Authorization (DPA) and Distribution Plans (DP).

(a) Upon receipt of a contract, Detachment 29 advises the Field Offices and CMPs by means of a DPA the quantity of product on contract that may be used by each to satisfy the requirements of using activities in its geographical area of responsibility.

(b) Upon receipt of a contract and a DPA, the Field Offices and CMPs determine product distribution requirements for activities in their areas and issue DPs to all interested or involved agencies. The DP may designate Air Force organizations, contractors, joint petroleum officers, or organizations of other Services as ordering offices, when appropriate. The DP furnishes the using activity with all necessary information pertaining to the supply of a given product for that activity for the period of time covered by the DP.

(c) Other major actions that must be performed by the Field Offices in conjunction with the issuance of a DP are to coordinate with Military Traffic Management and Terminal Service (MTMTS) pertaining to affreightment agreements for water transportation of

petroleum products; effect distribution of tonnage among carriers; select mode of transportation and nominate carriers using standing route orders assigned by MTMTS; issue AF Fuels Routing Instructions; provide shippers with Government bill of lading (GB/L) and maintain accountable records on GB/Ls; assure pre-positioning and level maintenance of peacetime and WRM inventories in Retail Distribution Stations; direct or request the movement of products as required to support activities in their area of responsibility; and establish product availability and lift point for the movement of POL products overseas.

(3) Bulk fuel requirements for CONUS and overseas areas that require product delivery by tankers are forwarded to DFSC on the monthly slate by either a joint petroleum office or Detachment 29. These requirements are satisfied through coordinated actions by DFSC, Detachment 29, and the Field Offices. Orders for such requirements are normally placed by Detachment 29, a Field Office, or an individual or activity appointed by a CMP.

(4) The supply of bulk ground fuels in the CONUS is normally made by contractual arrangements outlined in Area Supply Bulletin. These contracts are open-ended, unfunded contracts, essentially on an FOB destination basis, with deliveries by either tank truck or tank car. The using activity arranges with the supplier for deliveries as required or on an automatic filling arrangement, and the supplier or using activity arranges for the transportation of the product.

(5) Inland distribution in overseas areas is normally accomplished by Air Force facilities and equipment; the Army and Navy through Interservice Support Agreements; host-country pipelines or equipment through Service agreements; or facilities operated by an international organization such as the NATO pipelines in Europe and Italy.

(6) On-base distribution of petroleum products is normally made with Air Force organic equipment and personnel. In some instances, such as on training bases, distribution of Government-owned fuel is made under contract. In these cases, the contractor normally furnishes the equipment and personnel required to support the mission.

23. **AIR FORCE STORAGE.** Storage requirements are calculated on the basis of programming guidance furnished by Headquarters, U. S. Air Force, Director of Supply and Services. The storing command is responsible for determining the total tankage required at installations under its control. Normally, the total tankage required will be the sum of the peacetime operating level of supply requirement and the War Reserve requirement. The requirement thus computed should be increased by a factor of 1.1, which approximates the unusable portion of a normal tank. Tankage thus computed will be programmed in standard sizes of tanks outlined in the Air Force Civil Engineering Programming Standard Facility Requirements Manual, AFM 86-4. AFR 67-44 provides guidance on the minimum quantity of storage for War Reserve stocks that should be located on each installation when the full War Reserve requirement for storage is not available. Air Force Manual 67-1 establishes specific peacetime operating levels for overseas areas and closed port installations, and provides a standard formula that is used by other CONUS installations for determining these levels.

24. **ACCOUNTING.** The Air Force maintains central accounting and reporting for the aviation fuels category of the Fuels Division—Air Force Stock Fund (AFSF), to relieve the bases of financial accounting for aviation fuels. The Commander, San Antonio Air Materiel Area (SAAMA), Kelly Air Force Base, Texas, is responsible for the accounting and financial management aspect of the Fuels Division—AFSF which is exercised through SAAMA comptroller accounting and finance division. The Fuels Accounting Branch of this division performs its accounting functions at two locations, Kelly AFB, Texas, and at Cameron Station, Alexandria, Virginia. The component located at Cameron Station (Aviation Fuels Accounting Section) is collocated with, and is a part of, the Aerospace Fuels Supply Office (Detachment 29).

a. The Aviation Fuels Accounting Section located at Cameron Station does much of the detail accounting for the Fuels Division and provides summary input to the Division Accounting and Finance Office (DAFO) located at Kelly AFB. The functions of this section are:

(1) Receive monthly fuel inventory reports from activities such as Air Force bases military and commercial terminals, contractors and agencies having possession of Air Force-owned products accompanied by receipt, issue, and adjustment documents. These reports are audited and subjected to a detailed quantitative and financial analysis. From this analysis and related source documents journal vouchers are prepared for required inventory accounting. The supporting documentation which accompanies the monthly reports that are received from more than 300 field activities and contractors is used in conjunction with documentation that supports invoices to maintain control over inventory in transit between storage locations and inventory in transit from procurement. This is accomplished by an extensive matching process which relates individual consignor documents to individual consignee documents.

(2) Maintain accounts receivable and bills for sales to other than Air Force activities.

(3) Control U. S. Air Force/Royal Canadian Air Force suspense account activities associated with the exchange of aviation products issued to aircraft of the two countries.

(4) Control monetary deposits by operators of contract charter and civil aircraft made in advance of credit purchases of Air Force-owned petroleum products at Air Force installations.

(5) Receive, audit, and prepare for payment invoices from contractors and other Services and sources worldwide. This includes invoices for into-plane deliveries to all U. S. Government agencies, except the Navy, and preparation of reimbursement billings.

(6) Maintain and control the accounts-payable file by contract for bulk accounts payable. This includes accounting and financial control of each contract.

(7) Establish and maintain records of purchases at the purchase and standard prices to insure that costs are reported as incurred.

(8) Prepare journal vouchers and operating statements to summarize purchases, sales, inventory, receivable, payable and adjustment data at the close of each month. The journal vouchers are used to make postings to the general ledger which is maintained at Kelly Air Force Base. The operating statements are used in effecting Stock Fund management.

(9) Reconcile total accounting activity and prepare aging schedules for administration of the accounting system.

b. The other portion of the Fuels Accounting Branch at Kelly AFB performs Quality Reviews of the accounting system and is involved with three management categories of the AFSF—aviation fuels, missile fuels, and herbicides. The Reports and Analysis Section maintains the control accounts for the Aviation Fuels category. Additional functions include billing Headquarters, U. S. Air Force, for issues to Air Force customers, collecting for accounts receivable, controlling flow of cash in the stock fund, and maintaining accounting records for herbicides. Missile fuels are accounted for in much the same manner as aviation fuels, except the entire function is located at Kelly AFB. Each month, after all accounting transactions are summarized in the general ledgers, trial balances and financial statements are prepared for the three management categories. Quarterly financial statements are prepared in the formats applicable to all DOD stock funds for the combined Fuels Division and for each category. From these reports financial analyses are prepared in support of the Directorate of Aerospace Fuels. The Kelly AFB office, with the assistance of systems accountants from the Cameron Station component, prepares and disseminates accounting procedures for the Fuels Division.

APPENDIX B
AUTHORITY AND RESPONSIBILITY

APPENDIX B

AUTHORITY AND RESPONSIBILITY

1. Resupply of POL to an overseas area requires an interplay between several organizations: the Services, the unified commands, and the Defense Supply Agency. Each has a distinct role to play in this resupply. In order that the interrelationship might be more easily understood, the basic authority and responsibility of each of the three above-mentioned is presented in this appendix.

2. Listed in Table B-1 are the excerpts from Title 10, U. S. Code, JCS Pub 2 and JCS Pub 3, which delineate the authority and responsibility of the Services, the unified commands, and the DSA-DFSC in overall logistics and the specific area of POL resupply

TABLE B-1.
AUTHORITY AND RESPONSIBILITY OF SERVICES, UNIFIED COMMANDS,
AND DFSC (LOGISTICS)

LOGISTICS - GENERAL

Services

1. The Secretaries of the Military Departments are responsible for and have the authority to conduct all affairs - including logistical support for their respective services (Title 10, U.S. Code).
2. Logistic responsibilities are defined as those responsibilities of the Military Departments or Armed Forces for and/or performing logistic functions for one or more Services or components thereof in support of strategic, tactical or other plans and operations (Pub 3).
3. Each of the Services is responsible for logistic support of its own forces except when logistic support is otherwise provided for by agreement or assignment (Pub 3).
4. Each of the Services is responsible for providing for the provision of all supplies needed by its forces (Pub 3).
5. The Military Department and Services continue to have responsibility under the direction of the Secretary of Defense for the logistic and administrative support of component commands (Pub 2).
6. Each of the Services is responsible for supply support of its own forces in a unified command except when supply is otherwise provided for by agreements or assignments as to common servicing or cross servicing (Pub 3).

Unified Commands

1. Subject to the authority and direction of the President and Secretary of Defense, the Joint Chiefs of Staff shall - prepare joint logistic plans and assign logistic responsibilities to the Armed Forces in accordance with these plans (Title 10 U.S. Code Section 141-d).
2. The commander of a unified command is authorized to exercise directive authority within his command in the field of logistics (Pub 2).
3. The commander of a unified command shall establish priorities for construction projects (Pub 2).
4. The commanders of a unified command will review requirements of the Service components of his command and coordinate priorities, programs and interservice support agreements to utilize effectively supplies, facilities and resources to accomplish his mission (Pub 3).

TABLE B-1. (Continued)

5. Under wartime conditions and where critical situations make diversion of the normal logistic process necessary, the logistic authority and responsibility of commanders of unified commands are expanded to authorize them to utilize all facil-

ities and supplies of all forces assigned to their command as necessary for the accomplishment of their mission under the approved war plan being implemented (Pub 2).

DSA/DFSC

1. The DSA mission is to provide effective and economical support to the military services in the field of:

A. Material commodities and items of supply which are determined through application of approved DOD criteria, to be susceptible to integrated management by a single agency for all mil-

itary services or as otherwise determined by the Secretary of Defense.

B. Logistical Services directly associated with the supply management function and other supply services as directed by the Secretary of Defense (Pub 3).

OVERALL POL LOGISTICS

Services

1. The Secretary of each military department is responsible for the supply management of bulk petroleum products, including ownership and control of reserve and operating stocks with the exception of those functions assigned to DSA (DOD Dir - 4140.25).

2. The determination of requirements, with respect to both quality and quantity must remain a responsibility of the using department or agency (Pub 3).

Unified Commands

1. Commanders of commands established by the President are responsible for:

A. Coordination of all matters pertaining to the supply of all military bulk petroleum products within their commands (Pub 3).

2. Commanders of unified commands will establish a Joint Petroleum Office as a staff office of

their command in accordance with directives from the Joint Chiefs of Staff (Pub 3).

3. The Joint Petroleum Office will conform to the administrative and technical procedures established by DFSC to accomplish the DFSC-assigned mission (Pub 3.)

DSA/DFSC

1. The Director, Defense Supply Agency, is responsible for meeting the petroleum support re-

quirements of the military services as designated by DOD Dir - 4140.25 (Pub 3).

POL REQUIREMENTS

Services

1. The military services are responsible for computing zone of interior military petroleum product resupply requirements for tanker and barge movement and submitting to DFSC for supply action (Pub 3).

2. The determination of requirements, with respect to both quality and quantity, must remain a responsibility of the using department or agency (Pub 3).

TABLE B-1. (Continued)

Unified Commands

- | | |
|---|---|
| 1. Commanders of unified commands are responsible for reviewing and consolidating current area military requirements for slated petroleum | products and submitting these requirements for supply action in accordance with procedures established by DFSC (Pub 3). |
|---|---|

DSA/DFSC

- | | |
|---|--|
| 1. DFSC will establish procedures to be used by the Military Departments and Joint Petroleum offices in the submission of procurement and/or distribution requirements (DOD Dir 4140.25). | 2. The DFSC will establish slating procedures to be utilized in overseas commands in submission of petroleum requirements (Pub 3). |
|---|--|

POL PROCUREMENTServices

- | | |
|---|--|
| 1. The Military Services are responsible for submitting MIPR (DOD Form 448) to DFSC for procurement of bulk petroleum products (DSAM 4420.1). | 2. It is the responsibility of the appropriate accounting office of the requiring organization to certify as to the availability and adequacy of funds on each MIPR for material or services to be procured under firm quantity contracts (DSAM 4220.1). |
|---|--|

Unified Commands

- | | |
|---|---|
| 1. Commanders of unified commands are responsible for maintaining levels of supply established by | the Services and commenting on the adequacy or inadequacy thereof to the appropriate Service (Pub 3). |
|---|---|

DSA/DFSC

- | | |
|--|--|
| 1. The Director, DSA, is responsible for: conduct or direct procurement of bulk petroleum items to meet the needs of the Military Departments (DOD Dir 4140.25). | 4. DSA will administer procurement priorities in the purchase of petroleum products as authorized by the Assistant Secretary of Defense (I&L) (DOD Dir 4140.25). |
| 2. DFSC is responsible for procurement worldwide, of all petroleum products and commercial petroleum services requested by the Military Services (DSAM 4220.1). | 5. DFSC is responsible for the operational phases of purchase planning. This includes phasing the submission of requirements, consolidating these requirements, analyzing the market, and determining patterns for the phased placement of orders in such a manner as to assure meeting the needs of the Military Services at the lowest cost to the Government (DSAM 4220.1). |
| 3. DFSC may delegate procurement authority when deemed necessary to improve supply management or when required to meet military exigencies (DSAM 4220.1). | |

POL TRANSPORTATIONDSA/DFSC

- | | |
|---|---|
| 1. DSA will coordinate and arrange for required tanker transportation for the movement of military petroleum products in accordance with criteria and procedures established by the Executive Director MSTs (DOD Dir. 4140.25). | to meet bulk petroleum resupply requirements involving tanker, barge and tanker - barge combination movements. DFSC does not order deliveries for U.S. Air Force, U.S. Army Military Aid Program, FOB destination cargoes or U.S. Navy West Coast requirements (DSAM 4220.1). |
| 2. DFSC is assigned the responsibility and authority to select source and means of transportation | |

TABLE B-1. (Continued)

POL STORAGEServices

1. The Military Services are responsible for determining and submitting requirements to DFSC and collaborating with DFSC in the review of requirements for operating and reserve storage in overseas commands and CONUS (DSAM 4220.1).

2. Requirements for new or additional storage facilities that the Military Services desire under

the Military Construction Program are normally processed by the Military Services into prescribed DOD engineering or public works programs without referral to DFSC. DFSC, upon request of the Military Services, will investigate potential service contract costs for similar storage facilities. (DSAM 4220.1).

Unified Commands

1. The commander of a unified command will maintain levels of supply established by the Services and comment on the adequacy or inadequacy thereof to the appropriate Service (Pub 3).

2. The commander of a unified command will coordinate real estate requirements and construction of facilities within his command. He shall

establish priorities for construction projects (Pub 2).

3. Under emergency conditions the JPO will give advice on allocation of petroleum products and facilities (Pub 3).

DSA/DFSC

1. Contract on a world-wide basis for bulk commercial petroleum storage required by the Military Departments and administer the contracts. DSA may delegate, when desirable, the contracting responsibility for commercial storage in specific areas to overseas commanders through appropriate channels (DSAM 4220.1).

2. Insure that before commercial storage contracts are awarded that costs for such facilities will not be substantially and disproportionately higher than comparable Government facilities. The Military Departments will furnish cost estimates for comparative Government facilities. In the event of

a disagreement concerning relative costs and time utilization factors, all pertinent data will be forwarded to ASD (I&L) for action (DOD Dir. 4140.25).

3. In collaboration with the Military Departments, periodically review the requirements for operating and reserve bulk storage in the overseas commands and in CONUS. Make recommendations to the Military Departments for joint utilization of existing storage facilities in lieu of contracting for commercial facilities or acquisition of storage by Public Work Construction (DSAM 4220.1).

TABLE B-1. (Continued)

POL INSPECTIONServices

1. The following Government organizations are responsible for performing, or arranging for the performance of, including the maintenance of prescribed standards of inspection, those procurement inspections in specific geographical areas assigned to their inspection cognizance:

Army - Army Materiel Command
Navy - Chief of Naval Materiel Naval Systems Command

Air Force - Air Force Logistics Command
DSA - Deputy Director for Contract Administration Services
(DSAM 4220.1).

2. Specific geographical areas are assigned to the Military Departments for performance of petroleum procurement inspection (DSAM 4220.1).

DSA/DFSC

1. DSA will direct and control procurement inspection of all petroleum items world-wide. In overseas areas, established inspection facilities of

the Military Departments will be used (DOD Dir. 4140.25).

APPENDIX C
MAJOR PETROLEUM MANAGEMENT STUDIES

APPENDIX C

MAJOR PETROLEUM MANAGEMENT STUDIES

1. Since the designation of the Secretaries of the military departments as single managers for selected common-use items in 1956, there has been a series of studies on military petroleum management.

a. Logistics System Study Project

(1) In October, 1957, the Secretary of Defense in a memorandum to the Service Secretaries stated that at that time it was appropriate to appraise the steps taken in integrating the supply and logistics systems of the Services and to devise plans to improve such integration.¹ In this connection, a survey team of the Department of Defense examined the petroleum single-manager arrangement and, in December, 1957, reported five major conclusions. The team concluded that:

(a) The single manager concept had been so compromised with respect to petroleum that there was no true single manager for this commodity. In effect, the Military Petroleum Supply Agency was merely a continuation of the central procurement function of its predecessor organization, the Armed Services Petroleum Purchasing Agency.

(b) In the absence of requisite authority and funds, the Military Petroleum Supply Agency was relegated to the use of persuasion in its attempts to coordinate the requirements and distribution functions of the Services.

(c) Because of (a) and (b), the present system results in unilateral supply and financial actions by the three Services.

(d) The independent administration of requirements, distribution of POL and financial actions by the three Services result in high operating costs for petroleum management which could be reduced by the consolidation of these functions.

(e) The coordination of distribution by the Military Petroleum Supply Agency under the present system is time-consuming and tedious and would undoubtedly be unacceptable in wartime situation.²

(2) Based on the above conclusions, the survey team went on to recommend that the petroleum single manager assignment be fully broadened to include computation of requirements for the replenishment of peacetime stocks and that ownership of wholesale stocks be financed through a single stock fund. It further recommended that the executive director of the broadened Military Petroleum Supply Agency report to the Materiel Assistant Secretary of the Navy instead of the Bureau of Supplies and Accounts. The team report indicated that this step appeared appropriate in order to provide a setting when the interests of all Services could be assured.

¹Secretary of Defense, Memorandum, subject: Study of Defense Programs for the Integration of Supply and Logistics Systems, 7 October 1957.

²Logistics Systems Study Project. Report by Team No. 2, subject: Military Petroleum Supply Agency, 20 December 1957.

(3) The Steering Group of the Logistics System Study Project disagreed with the survey team's report with respect to the establishment of a wholesale stock fund and placing the ownership of all wholesale stocks under the single manager. The Steering Group held that bulk petroleum is so intimately related to military operations that other solutions should be sought.³

b. Commodity Single Manager Evaluation Report

(1) In November, 1958, the Office of the Assistant Secretary of Defense (Supply and Logistics) initiated another study of the Single Manager for Petroleum. A team of specialists, military and civilian, was selected from top-level petroleum elements of the Department of Defense and the three Services. Its mission was twofold:

(a) "Compile and codify available facts and data relating to the performance of the Single Manager for Petroleum from the date of its inception to date in order to provide a basis for authoritative conclusions with respect to the efficiency, economy and effectiveness of this concept in normal peacetime operations.

(b) "Expose for immediate correction, residual defects in the Single Manager for Petroleum organization and operation."⁴

(2) In its approach to the study, the team stated that petroleum possessed certain properties and features which distinguished it from other items of supply and which must be considered in any appraisal of petroleum logistics. Other commodities are generally distributed from the continental United States outward while military petroleum requirements are obtained from the refineries throughout the world. Accordingly, distribution of petroleum is a major consideration. The team stated further that the nature of bulk petroleum is such that it required specialized transportation, storage, and handling facilities — the availability of which is usually limited in emergencies. Also, characteristic of bulk petroleum is the high dollar-value of procurements and shipments and the rapid turnover of inventories. Rapid turnover is also characteristic of industry operations, which means that larger requirements are not usually available from commercial suppliers on short notice without prior contractual arrangements.⁵

(3) The team went on to list a number of distinctive characteristics of the military petroleum supply system which are summarized below:

(a) Method of supply. Within the continental United States, most petroleum requirements are supplied directly from the commercial supplier to the user. In overseas commands, however, petroleum is normally delivered initially to Service terminals or depots and subsequently distributed to users.

(b) Legal Constraints. Since a significant portion of military petroleum requirements is obtained from sources outside the United States, its procurement is complicated by such legal restrictions as tariffs, import quotas, and the "Buy American" act.

(c) Transportation. The vast volumes and distances involved in the worldwide supply of petroleum underscore the importance of transportation as a major factor in costs and supply effectiveness. Close coordination between the services, the Military Petroleum Supply Agency, the Military Sea Transport Service, and the Military Traffic Management Agency is essential.

³Department of Defense, Commodity Single Manager Evaluation Report, November 1958.

⁴Ibid., p. 1.

⁵Ibid., p. 3.

(d) Distribution in the United States. For requirements within the continental United States, the Military Petroleum Supply Agency consolidates Service procurement programs by product and by region or installation. It then arranges open-end contracts to supply these requirements on a "call" basis directly from the supplier to the user. Accordingly, the function of distribution direction from these contracts is largely decentralized to the using installations or, in the case of the Air Force, to one of its five field offices.

(e) Distribution in Oversea Areas. The joint petroleum office on the staff of each overseas unified commander has responsibilities such as reviewing and consolidating current PACOM area military requirements for stated petroleum products (bulk POL and packaged fuel), submitting these requirements for supply action in accordance with procedures established by the Military Petroleum Supply Center, and coordinating all matters pertaining to the supply of all military petroleum products within PACOM.

(f) Interservice Support to Oversea Areas. Under the purchase and consignment arrangement, a single Service is assigned responsibility for supplying designated products to designated overseas areas to satisfy the requirements of all Services in the assigned area. This Service responsibility includes obtaining requirements, budgeting and funding for them, and requesting appropriate procurement action from the Military Petroleum Supply Agency.

(g) Interservice Support within Oversea Areas. Purchases and consignment responsibility ends with the arrival of the petroleum shipment in the overseas area. A second arrangement is necessary for support within the area. In this connection, a single Service is usually assigned support responsibility for all Services within the designated overseas area. These assignments may involve the operation of petroleum terminals, depots, pipelines, and other facilities which are required in furnishing this support. Such assignments are based on predominance of product interest or on interservice agreement.⁶

(4) In discussing the Logistics System Study Project Team's recommendation that the Petroleum Single Manager assignment be fully implemented to include ownership of wholesale stocks financed through a single stock fund, the Commodity Single Manager Evaluation Report included the following comments:

"The present petroleum supply system which has evolved since the beginning of World War II has worked well in peace as well as in emergencies. The system includes central procurement authority and a substantial degree of coordinated distribution, worldwide. It is providing high supply effectiveness, high stock turnover, and low operating inventories. Cross hauls and back hauls are minimized but may still occur when other factors including military considerations outweigh potential economies. The weakness in the present system is its dependence on the degree and success of coordination attained among MPSA and the Services. From a Department of Defense viewpoint, no single individual can be considered the 'commodity manager' as in the case of the other Single Manager assignments.

"The other commodity single managers, to a greater degree, manage commodities which are supplied from vendor to depot to user. Large operating stocks and extensive military depot distribution systems are required.

"The military petroleum supply system has different characteristics. Although there are mobilization reserve stocks in CONUS, wholesale operating stocks, as commonly referred to in other commodity areas, do not generally exist for bulk POL in CONUS. Supply is normally direct from vendor to user. Thus, full implementation of the Single Manager assignment would result in no appreciable change in the present method of supplying bulk petroleum in CONUS.

⁶Ibid., pp. 5-7.

Single Service supply support of major bulk petroleum products to specified overseas areas is being accomplished. Within specified geographical regions of major overseas commands, such as France, Germany, Alaska, Japan and Korea, a single Service is responsible for petroleum distribution for all Services. Within theaters, the Unified Commanders through the JPO system, are responsible for fostering and coordinating inter-service supply support in order to prevent overlapping and duplication. These arrangements are under continual review by MPSA and the Services for possible improvement. While other Single Manager assignments are limited to CONUS, functions of the Petroleum Single Manager extended overseas."

(5) The Commodity Single Manager Evaluation Report on the Military Petroleum Supply Agency contained some 27 conclusions. The most significant of these stated essentially that the present military petroleum supply system was effective. The primary objective of the single manager plan (elimination of duplication and overlapping of effort among the Services and improvement in the effectiveness and economy of supply and Service operations throughout the Department of Defense) was deemed to have been achieved without wholesale stock ownership or stock fund management by the Military Petroleum Supply Agency. Its most significant recommendation was aimed at assisting the Military Petroleum Supply Agency in overcoming the previously cited coordination problem. It recommended that the Military Petroleum Supply Agency and the Service inventory control point activities be located together physically at the earliest practicable date.⁸

c. Logistics Management Institute Study. On 10 December 1962, a civilian agency, the Logistics Management Institute, was requested to make a review of past studies of the management of bulk petroleum to determine the desirability of reopening the matter. On 21 February 1963, the Logistics Management Institute published its finding in which it concluded that the present system is efficient and dependable and that additional studies as to the advisability of increased authority of the Defense Petroleum Supply Center appeared unnecessary, the subject having been more than adequately explored.⁹ The report was then passed to the Joint Chiefs of Staff, the Service Secretaries, and the Director of the Defense Supply Agency by the Assistant Secretary of Defense (Installations and Logistics) with the recommendation that no further action be taken on the matter of bulk petroleum management. All parties concurred in his recommendation.

d. The Department of Defense Petroleum Management Study Group Report.

(1) On 21 June 1968, the Secretary of Defense requested the Assistant Secretary of Defense (Administration) to undertake a complete and comprehensive study on a worldwide basis to determine the most efficient and effective way to manage petroleum in the Department of Defense. The Secretary of Defense specified that the study should consider the following management options:

- (a) The status quo
- (b) The status quo with changes in the ICP's to ensure standardization of responsibilities, procedures and functions.
- (c) Establish a single manager relationship under one military department.

⁸Ibid., p. 39.

⁹Logistic Management Institute: Control of Bulk Petroleum, 21 February 1963, p. 20.

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(d) Expand DSA responsibilities and functions to include those now assigned the military departments. ¹⁰

(2) On 4 October 1968, the Petroleum Management Study Group published its report. This report is treated in detail in Chapter VII and Appendix D. ¹¹

¹⁰ Secretary of Defense Memorandum, subject: Management of Petroleum, 21 June 1968.

¹¹ Assistant Secretary of Defense (Administration), Report of the Petroleum Management Study for the Department of Defense, Volumes I, II, and III, October 1968 (FOR OFFICIAL USE ONLY).

APPENDIX D
COMMENTS ON DOD PETROLEUM
STUDY GROUP REPORT

APPENDIX D

COMMENTS ON DOD PETROLEUM STUDY GROUP REPORT

1. INTRODUCTION. This appendix is a compilation of comments on the DOD Petroleum Study Group Report.

2. JCS. The JCS reply was contained in Memorandum JCSM-629-68, Report of the DOD Petroleum Management Study Group, 23 October 1968. This memorandum was based on the coordinated positions of the Services and JCS staff.

"1. Reference is made to a memorandum by the Assistant Secretary of Defense (Administration), dated 9 October 1968, subject as above.

"2. In accordance with the request contained in the reference, the Joint Chiefs of Staff have reviewed the Report of the Petroleum Management Study Group for the Department of Defense. Particular attention has been paid to the Summary Conclusions and Recommendations appearing in chapters 7 and 8.

"3. The Joint Chiefs of Staff do not agree with the establishment of the 'Management Fund' to finance procurement of bulk petroleum products and related transportation to first point of acceptance by a department stock fund.

"4. Analysis indicates that the 'Management Fund' was recommended primarily to overcome deficiencies in the selection of the source and placement of orders for large shipments of petroleum products to be moved by ocean-going tankers. Centralization of source selection in one agency would contribute to more economical use of available shipping by minimizing split loadings and split discharges. Every effort should be made to realize all economies available in this area. The Joint Chiefs of Staff believe these economies can be fully realized without the need for superimposing a 'Management Fund' over the current stock funds of the Services. The need for additional capitalization funds, additional manpower, and accounting required could be eliminated by having the Defense Supply Agency exercise the authority to select the source for all petroleum cargoes destined for overseas or coastal ports in CONUS. Once the source has been selected, the Services will designate the ordering officer and make a direct citation of Service funds (except the Air Force, which utilizes inventory and capital control procedures). Since all the Services have collocated their petroleum inventory control points in the same building with the Defense Supply Agency at Cameron Station, the placement of orders with Service funds would require minimum coordination and achieve the desired objective without the need for a 'Management Fund' with its attendant costs and accounting duplication. The Joint Chiefs of Staff recommend that source selection responsibilities for all petroleum cargoes destined for overseas or coastal ports in CONUS be exercised by the Defense Supply Agency.

"5. Other recommendations appearing in the report pertain to individual functional areas of petroleum management. These recommendations have varying degrees of impact upon the Services and are not commented upon in this memorandum. Comments will be made, as appropriate, by the individual Services during their review of the report."

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3. ARMY. The Army reply was in DA (I&L) Memorandum, Report of DOD Petroleum Management Study Group, 29 November 1968 and enclosure thereto.

"1. Reference: Assistant Secretary of Defense (Administration) multi-addressee memorandum, Subject: 'Report of the DOD Petroleum Management Study Group dated 9 October 1968.'

"2. Referenced memorandum requests review of subject report. This memorandum and review incorporate the views of Army Materiel Command as well as comments of the Army Petroleum Center.

"3. As stated in subject report, the summaries represent the judgement of the Chairman of the Study Group, formed after his evaluation of the report as whole, and after consideration of the basic information gathered during the course of the study.

"4. The basis for this analysis of the Study Group Report is to consider the objectives of responsiveness and efficiency of support to the customer, and the accomplishment of the assigned mission of the Army in supply of bulk POL worldwide. The operational effectiveness of the current petroleum logistical system has been recognized in the study, therefore every effort must be made to assure that the system for the management of petroleum continues to be operationally effective and responsive. There is no system in operation that cannot be improved so, to this end, the comments on the subject report have been developed.

"5. The Petroleum Management Study Group Report recommends the adoption of the 'Optimum Management Option.' With certain exceptions, the Army concurs that this option would result in the most efficient and effective use of resources in the management of bulk petroleum.

"6. The Army concurs with the recommendations contained in Chapter 8, Vol I, with the following exceptions:

"a. The Army does not concur in designating a single DOD organization as claimant on bulk POL contracts at Post, Camp and Station level.

"b. The Army does not concur in assignment to DSA of the distribution and ordering functions as they apply to Post, Camp and Station level. Distribution plans must remain a function of that service to meet that service's logistics requirements.

"c. The Army does not concur in the establishment of a DSA Management Fund. Superimposing another accounting level over the Army Stock Fund would lead to duplication of functions.

"7. As stated previously, the Army concurs in the recommendation that certain improvements can be effected in the petroleum system. These improvements have been discussed in detail in comments pertaining to Volume II of the Study (Inclosure 1). This is a continuing action so far as the Army is concerned."

"Army Comments to Volume II, Evaluation, Report of the Petroleum Management Study Group for the Department of Defense

"Chapter 10. Requirements

"Recommendations:

'A. That the determination of mobilization reserve, operating and procurement requirements remain a Service responsibility under any management option selected.'

"COMMENT: Concur.

'B. That the authorized number of days for mobilization reserve stocks to be prepositioned overseas be the same for all Services and consist of the wartime shipping time plus the minimum safety level specified in JCS, Pub 3.'

"COMMENT: Concur (See Para E, Chapter 17)

'C. That ASD (I&L) inform JCS and the Services the results of his mobilization planning with industry and whether or not mobilization reserves in excess of JCS prepositioned authorizations are necessary.'

"COMMENT: Concur.

'D. That operating requirements for ground POL at CONUS posts, bases and stations be reviewed at ICP level only.'

"COMMENT: Concur.

"Chapter 11. Procurement

"Recommendations:

'A. A single DOD organization be given the responsibility and authority to:

'1. Act as the DOD claimant and designate the ordering officer on all contracts. This would include authority to delegate these responsibilities and to conduct direct communications with assigned ordering officers.'

"COMMENT: Concur with designation of ordering function to DFSC (with minor exception, e.g. MAP requirements) to meet tanker lifting. Nonconcur with designation of ordering function to DFSC at post, camp and station level (it is understood that study group did not intend this recommendation to apply to PC&S).

'2. Establish a reporting system for the purpose of monitoring contractor performance. This includes authority to communicate directly with the procurement inspectors, ordering officers and other personnel who have been delegated responsibility requiring direct contacts with the contractors.'

"COMMENT: DSA-DFSC presently have the responsibility for contract administration. Full information may be obtained by DFSC direct from field elements.

'3. Funding arrangements to finance procurement and ordering from contracts be made in such a manner as to permit the above actions without encumbrance to the organization procuring and placing orders under the contracts.'

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'COMMENT: Control of funds to finance procurement has not been shown in the report to be a substantiating cause for the establishment of a management fund. The report does not show where any efficiency or better management can be obtained by their having this funding capability.

'B. The policies and procedures concerning the DOD International Balance of Payments be reviewed and revised with a view of achieving a compatible relationship between the procurement guidance and execution and the financial management policies and procedures concerning projection, control and reporting of expenditures of the service stock funds.'

'COMMENT: Concur.

'C. The conclusions regarding the capability under management option 4, to overcome deficiencies in the current system, be considered in the selection of the management option to be adopted.'

'COMMENT: Not applicable as option 4 not considered.

"Chapter 12. Distribution and Transportation

"Recommendations:

'A. The conclusion regarding the capability under management options 3 and 4 to overcome deficiencies in the current system be considered in the selection of the management option to be adopted.'

'COMMENT: Not applicable as options 3 and 4 not considered.

'B. If some option other than option 3 or 4 is adopted, it should include as a minimum:

'1. Granting of full and sole authority to the DFSC for source selection and placing orders on contracts, with the power of delegation as desirable, including the issuance of such distribution plans as necessary.'

'COMMENT: See comment Chapter 11A.

'2. Providing the DFSC with the control of the funds to obtain and move product to destination.'

'COMMENT: Providing DFSC with funds to obtain and control the movement of product to first destination is not considered to be advantageous as compared to the existing system. Service stock funds are currently used to procure bulk POL and the establishment of another layer of stock fund activities (management fund) will simply provide additional duplication with all the inherent difficulties. (See Para 5E, basic letter.)

'3. Elimination of the duplicating functions of the AFAFFOs. Consolidating and jointly staffing, under the DFSC, the remaining field offices as needed.'

'COMMENT: Concerned with Air Force only.

"Chapter 13. Inventory Management

"Recommendations:

'A. The impact of the management option selected on the inventory management function as shown in Section IV be considered in the overall evaluation of the management options to be recommended.'

"COMMENT: Concur with the study analysis that the present system of inventory management is effective.

'B. That the suggested solutions to the problems outlined in paragraph IIIB, 1 through 4, be implemented.'

"COMMENT: Concur with the suggested solutions to the problems outlined in paragraph IIIB.

"Chapter 14. Finance Management

"Recommendations:

'A. That if option 2 or some form of management short of full integrated management is selected, a "Management Fund" be authorized for the Defense Supply Agency to finance funded contracts, to fund orders placed by that Agency and to fund first destination transportation for orders placed by it.'

"COMMENT: See comment above on Chapter 11.

'B. That if option 4 should be adopted as stated in paragraph IVA2 by establishing a Defense Fuels Stock Fund Division for bulk fuels, with "projects" corresponding to the present departmental stock fund division of "materiel categories" for bulk fuels, to finance fuels from time of order to issue to end-use or authorized customer.'

"COMMENT: Not applicable as option 4 not considered.

'C. The Air Force finance and manage bulk ground and heating fuels at air bases in the same "materiel category" and manner as bulk aviation fuels, as indicated in paragraph IIIB1.'

"COMMENT: Concerned with Air Force only.

'D. Actions be taken to improve the quality and timeliness of contractor accounting and reporting for government-owned bulk fuels being delivered commercially on through-put contracts to Southeast Asia as indicated in paragraph IIIB2.'

"COMMENT: Concur.

'E. Uniform into-plane issue procedures, forms and machine listing of issues to support bills be developed by the Air Force in cooperation with the other departments and under the policy guidance of OASD(C) as indicated in paragraph IIIB3.'

"COMMENT: Concur.

'F. The military departments develop uniform procedures and standard forms for quantitative inventory accounting procedures for use by field activities as indicated in paragraph IIIB4.'

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'COMMENT: Concur to the extent possible and compatible to service organizations and structures.

'G. The Army and Air Force revise stock fund accounting procedures at posts, bases and stations for bulk ground and heating fuels to maintain these products in stock fund inventory until issue to end-use to simplify accounting and reimbursement procedures as stated in paragraph IIIB5.'

'COMMENT: Nonconcur. Bulk ground and heating fuels are procured by Army PC&S off the contract bulletins in most cases. The products are consumed within a relatively short period of time and are and should be financed by consumer funds. Retaining these funds in the stock fund inventory imposes an unnecessary fiscal transaction.

'H. Each department review its procedures for procurement of commercial deliveries of bulk fuels directly into military consuming equipment to insure that whenever feasible it is charged directly to appropriations and that other government agencies ordering off bulletin contracts are billed directly as outlined in paragraph IIIB6.'

'COMMENT: Concur. Army will examine feasibility of direct billings.

'I. Billing and reimbursements for stock fund issues of bulk fuels in Vietnam be implemented in accordance with the "Memorandum of Understanding Reimbursement of POL Issues in Vietnam" dated 27 June 1968, between the Comptrollers of the military departments without requirements for additional data to be forwarded by MACV. See paragraph IIIA8.'

'COMMENT: Concur. Implementing procedures for the Memorandum of Understanding have been developed and are being staffed through the Departments of Army, Navy, and Air Force.

"Chapter 15. Cataloging and Standardization

"Recommendations:

'A. That the functions of cataloging and standardization of bulk petroleum products remain as currently assigned under management of options 1, 2, and 4.'

'COMMENT: Concur.

'B. In the consideration of management of option 3, the problems mentioned in paragraph IVB above should be recognized.'

'COMMENT: Concur.

"Chapter 16. Personnel Requirements and Training

"Recommendations:

'A. That under any management option selected, a more attractive career field for petroleum management specialist be established in each Service and that the authorized grade structure be improved so as to attract and retain qualified petroleum specialists.

'B. That the position of Commander, DFSC, be rotated among all three Services.

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'C. That the personnel authorization tables of DFSC be revised to provide for military petroleum specialists in grades O-4 and O-5.

D. That petroleum management offices be placed in the Services organizational structures so as to report directly to the logistics chief (Director of Materiel, G-4 or equivalent).

'E. Service overseas procurement inspection personnel be included in the DCAS personnel program for rotation and job retention rights. '

"COMMENT A-E: Concur.

"Chapter 17. Management of Petroleum During Emergency Conditions

"Recommendations:

'A. In the selection of the management option to be adopted, the conclusion that either option 3 or 4 would provide a more effective coordination of petroleum supply under emergency situations than would options 1 and 2 be given consideration. '

"COMMENT: Concur.

'B. The production planning function and the coordination of petroleum supply under emergency situations be assigned as provided in section IVB, preceding. '

"COMMENT: Concur.

'C. The office of ASD (I&L) be staffed with at least two additional personnel experienced in petroleum logistics. '

"COMMENT: No objection.

D. DOD establish a working group under the direction of DSA to develop a system for obtaining and disseminating petroleum intelligence. '

"COMMENT: Concur in principle but the study group should be under the direction of ASD (I&L) rather than DSA.

'E. The authorized number of days Prepositioned War Reserve Stocks (PWRS) be the same for all services and consist of shipping time plus minimum safety levels as prescribed by JCS. '

"COMMENT: Concur with the addition of the words, 'in a given geographical area overseas' after the word 'service' in the second sentence. Each geographical area may differ in respect to its resupply capability, source of product, and delivery time elements.

"Chapter 18. Overseas Operations

"Recommendations:

'A. That no basic change be made in the JCS directed organization of Joint Petroleum Offices in each unified command or the functions assigned to them. '

"COMMENT: Concur.

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'B. That the resupply requirements of overseas areas continue to be submitted in the form of "slates" directly to DFSC.'

"COMMENT: Concur.

'C. That the Services continue to operate the overseas terminals and distribution systems with the maximum of inter-service support.'

"COMMENT: Concur.

'D. That long range coordinated planning between the unified commander and the components be accomplished, possible on five year projections, to insure that over-all petroleum storage and distribution facility requirements are adequately considered.'

"COMMENT: Concur.

"Chapter 19. DFSC-Service ICP Complex

"Recommendations:

'A. The conclusion (paragraph IIIC above) regarding the capability under management options 3 and 4 to overcome deficiencies in the current system be considered in the selection of the management option to be adopted.

'B. If option 2 is adopted it include, as a minimum, that the AFAFPSO be assigned:

'1. The requisite technical mutually agreed upon between the SAAMA and DFSC.

'2. The requisite authority to perform all assigned functions.

'C. If the modified option (paragraph IIID above) is selected, that in addition to the requirements of option 2, AFAFPSO and the Army and Navy ICPs be authorized and staffed to conduct direct liaison with DFSC for financial planning and programming matters (including DFSC billing to Services and DFSC payments to contractors) and transportation matters.'

"COMMENT A-C: See comments on Chapter 11, 12, and 14 above for the Army's position on the management option."

4. NAVY. The Navy reply was contained in CNO Memorandum, OP-403 Ser 849 P403, Report of the DOD Petroleum Management Study Group, dated 20 November 1968 and enclosure thereto.

"Ref: (a) ASD(A) memorandum, subject: Report of the DOD Petroleum Management Study Group, 9 Oct 68

"Encl: (1) Summary of Comments, Chapters 10 through 19

"1. Reference (a) addressed to the Secretary of the Navy requested comments relative to the Report of the DOD Petroleum Management Study Group.

"2. There is no commodity which is more critical to the operating forces, to their readiness and to combat effectiveness than the fuel on which the mobility of these forces depends. It is thus imperative that no procedures be adopted which would detract from the control required by the Services and operational commands to insure adequate support under all situations, including that of dynamically changing warfare situations. The study has been reviewed with this in mind.

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"3. The primary recommendation of the report (Chapter 8), the adoption of the Optimum Management Option is concurred in, except for those portions involving the DSA 'Management Fund' and the concept of total centralization of the ordering and distribution functions. The majority of deficiencies cited as compelling reasons for the 'Management Fund' can be corrected by strengthening the role of the Defense Fuel Supply Center (DFSC) to exercise their source designation and ordering function. As contracting officer, DFSC now has authority to receive periodic reports on contractor administration and current status of contract balances. Exercising this responsibility would give DFSC control and full knowledge of contractual assets and demands placed against the contracts. Implementation of a 'Management Fund' will introduce an additional layer of accounting with associated requirements for capitalization funds, manpower and accounting records, instruction and reconciliation. Thus, this portion of the optimum option could well increase overall administrative costs to the Department of Defense.

"4. The second recommendation, to do with proper interface and coordination with the DFSC, is concurred in.

"5. The third and final recommendation could be interpreted as an endorsement of all the recommendations of all the chapters. Some are overlapping; some are inconsistent; and the specifics of the chapters do not reflect extensive interplay amongst members of the study group. Thus, comments on these many detailed recommendations are forwarded as enclosure (1).

"6. Other comments on the study follow.

"7. Before additional functions are recommended for assignment to DFSC, determination should be made as to the effectiveness and efficiency with which they can be performed. As an example, requirements for JP-4 and JP-5 are submitted to DFSC with 4-1/2 months administrative lead time while into-plane contracts and other foreign buys require 6 months administrative lead time. Even with this long processing time, it is understood that DFSC contracts and contract bulletins are not being received by the Inventory Control Points (ICPs) earlier than 5 days before the contract period.

"8. The study group was charged with responsibility of determining ways of effecting 'considerable savings.' The study estimated up to 30 percent in personnel savings could be realized in consolidation. Although this statement was not placed in the conclusions or recommendations, it is believed that it is essential to point out the misleading nature of such an unsupported statement. The Manpower Validation Survey conducted during 29 April - 3 May 1968 bears out the fact that Navy Fuel Supply Office (NFSO) is carrying out the ICP mission with minimum staffing in that an increase of two civilian personnel spaces over the current ceiling of 51 was recommended.

"9. That portion of the Optimum Management Option recommending total centralization of ordering and distribution functions is deemed inadvisable for base and camp orders and at major pipeline terminals. These particular functions can most effectively and efficiently be controlled by operators in the field as is not being done.

"10. The study group made a comprehensive analysis of petroleum supply management and recognized that 'the basic directive and contacts with the Services confirmed that the current arrangements provide petroleum supplies to users on a timely basis' and that current arrangements are operationally effective and responsive. In summary, since the present system is operationally effective and responsive and with contract administration authority now being held by DFSC, it is believed that the highest degree of effectiveness can be attained by adopting the 'Optimum Management Option' less the 'Management Fund.' "

"Summary of Comments on Recommendations in Study Report Chapters 10 Through 19. All Recommendations contained in these Chapters are acceptable except as noted below:

"Chapter 10. Requirements

"Recommendations:

'B. That the authorized number of days for mobilization reserve stocks to be prepositioned overseas be the same for all Services and consist of the wartime shipping time plus the minimum safety level specified in JCS, Pub 3.'

"COMMENT - Do not concur. The number of days for mobilization reserve stocks should not necessarily be the same for all Services. Each Service should have the flexibility to set its mobilization levels to fit the needs that may be peculiar to that Service. JCS Pub 3 (021602) states that 'prescribed stock levels shall be uniform among military departments where practicable and where similar conditions exist.' This wording of JCS Pub 3 allows for differences in number of days of mobilization reserve.

'D. That operating requirements for ground POL at CONUS posts, bases and statics be reviewed at ICP level only.'

"COMMENT - Do not concur. This should be a Service decision. It would be unacceptable not to allow the chain of operational control to review if it was so desired.

"Chapter 11. Procurement

"Recommendations:

'A1. Act as the DOD claimant and designate the ordering officer on all contracts. This would include authority to delegate these responsibilities and to conduct direct communications with assigned ordering officers.'

"COMMENT - Do not concur. Total centralization of ordering and distribution functions is deemed inadvisable for base and camp orders and at major pipeline terminals. These particular functions can most effectively and efficiently be controlled by operators in the field as is now being done.

'A2. Establish a reporting system for the purpose of monitoring contractor performance. This includes authority to communicate directly with the procurement inspectors, ordering officers and other personnel who have been delegated responsibility requiring direct contacts with the contractors.'

"COMMENT - Concur, but only if improvements over current methods and procedures can be achieved. The Navy ICP is unaware of problems existing in this area.

'A5. Funding arrangements to finance procurement and ordering from contracts to be made in such a manner as to permit the above actions without encumbrance to the organization procuring and placing orders under the contracts.'

"COMMENT - Do not concur. For a procurement agency to need its own funds to perform the procurement service for the customer who will own and manage the items procured does not appear to be valid. See additional comments in paragraph 4 of covering letter.

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'C. The conclusion regarding the capability under management option 4, to overcome deficiencies in the current system, be considered in the selection of the management option to be adopted.'

"COMMENT - Do not concur that adoption of management option 4 would overcome deficiencies in the current system. Other chapters of the Study Report state the opposite that adoption of either option 3 or 4 'would cause the most turbulence in the petroleum support system' (page 7-14), also page 13-16 states 'Selection of either option 3 or 4 would adversely affect the present effective inventory management systems utilized by the Services since another organization would perform this function for a portion of the total responsibility. This would create dual systems and reporting; and would reduce the control the Services have over their total inventories, particularly mobilization stocks. In addition, fragmentation of this function between agencies would reduce or eliminate present military department petroleum organizations and experienced manning, which would reduce their effectiveness, reduce career development progression and reduce the ability of the Services to improve their petroleum logistic systems at all levels '

"Chapter 12. Distribution and Transportation

"Recommendations:

'A. The conclusion regarding the capability under management options 3 and 4 to overcome deficiencies in the current system be considered in the selection of the management option to be adopted.'

"COMMENT - Do not concur. Refer to comments made on Recommendation C, Chapter 11.

'B1. Granting of full and sole authority to the DFSC for source selection and placing orders on contracts, with the power of delegation as desirable, including the issuance of such distribution plans as necessary.'

"COMMENT - Do not concur with sole authority for ordering for the same reasons as Recommendation A1, Chapter 11.

'B2. Providing the DFSC with the control of the funds to obtain and move product to destination.'

"COMMENT - Do not concur for same reasons as for Recommendations A3, Chapter 11.

'B3. Elimination of the duplicating functions of the AFAFFOs. Consolidating and jointly staffing, under the DFSC, the remaining field offices as needed.'

"COMMENT - No comment. 'This is an Air Force area of responsibility.

"Chapter 13. Inventory Management

"Recommendations:

'B. That the suggested solutions to the problems outlined in paragraph IIIB, 1 through 4, be implemented.'

"COMMENT - 1) Do not concur with need to publish a standardization handbook for CONUS since Handbook Std H-200B could be modified for use in both CONUS and overseas.

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"2) At the departmental level, procedures are being adopted to implement the Memorandum of Understanding based upon criteria established by the drafters of this document.

"3) Concur.

"4) Do not concur. Internal operating procedures should be left as a prerogative of the individual Services.

"Chapter 14. Financial Management

"Recommendations:

'A. That if option 2 or some form of management short of full integrated management is selected, a "Management Fund" be authorized for the Defense Supply Agency to finance funded contracts, to fund orders placed by that Agency and to fund first destination transportation for orders placed by it.'

"COMMENT - Do not concur. The fund is not necessary and it creates another layering of accounting, this increases rather than decreases staffing requirements. See covering letter for additional comments.

'B. That if option 4 should be adopted as stated in paragraph IVA2 by establishing a Defense Fuels Stock Fund Division for bulk fuels, with "projects" corresponding to the present departmental stock fund division or "material categories" for bulk fuels, to finance fuels from time of order to issue to end-use or authorized customer.'

"COMMENT - Refer to comments made for Recommendation C, Chapter 11. Weaknesses in the present system can be overcome by strengthening the role of DFSC to exercise its source designation and ordering function.

'C. The Air Force finance and manage bulk ground and heating fuels at air bases in the same "material category" and manner as bulk aviation fuels, as indicated in paragraph IIIB1.'

"COMMENT - No comment. This is a matter that should be decided by the Air Force.

'D. Billing and reimbursements for stock fund issues of bulk fuels in Vietnam be implemented in accordance with the Memorandum of Understanding - Reimbursements for POL Issues in Vietnam: dated 27 June 1968, between the Comptrollers of the military departments without requirements for additional data to be forwarded by MACV.'

"COMMENT - At the departmental level, procedures are being adopted to implement the Memorandum of Understanding based upon criteria established by the drafters of this document.

"Chapter 16. Personnel Requirements and Training

"Recommendations:

'A. That under any management option selected, a more attractive career field for petroleum management specialists be established in each Service and that the authorized grade structure be improved so as to attract and retain qualified petroleum specialists.'

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"COMMENT - Overall consideration must be given to total Service needs, not just in the petroleum area, in order to arrive at a balance which will best utilize available personnel.

'B. That the position of Commander, DFSC, be rotated among all three Services.'

"COMMENT - Qualifications and experience are factors to be considered. It is understood currently to be DSA policy to rotate the billet of Commander, Defense Supply Centers among the Services to the extent advisable. Exceptions to this policy have existed in the past, and may be desirable in the future.

'D. That petroleum management officers be placed in the Services' organization structures so as to report directly to the logistics Chief (Director of Material G-4 or equivalent).'

"COMMENT - Do not concur. This should be left to individual commanders or Service to decide.

"Chapter 17. Management of Petroleum During Emergency Situation

"Recommendations:

'A. In the selection of the management option to be adopted, the conclusion that either option 3 or 4 would provide a more effective coordination of petroleum supply under emergency situations than would operations 1 and 2 be given consideration.'

"COMMENT - See comments made for Recommendation C, Chapter 11. A key point that must be considered is that the system must ensure responsive Service support. The present system does this, and centralization would not necessarily result in better logistics support. The present system is a proved system, and is both effective and efficient.

'C. The office of the ASD (I&L) be staffed with at least two additional personnel experienced in petroleum logistics.'

"COMMENT - No comment.

'D. DOD establish a working group under the direction of DSA to develop a system for obtaining and disseminating petroleum intelligence.'

"COMMENT - The need is not understood since it is now being done by the Defense Intelligence Agency (DIA). If more detailed data is required, suggest tasking DIA to expand its present petroleum intelligence gathering effort.

'E. The authorized number of days Prepositioned War Reserve Stocks (PWRS) be the same for all Services and consist of shipping time plus minimum safety levels as prescribed by JCS.'

"COMMENT - Do not concur. See comments made on Recommendation B, Chapter 10. Although commented on in the covering letter, this is an example of a repetitious recommendation which also appears elsewhere in the Study Report.

"Chapter 19. DFSC - Service ICP Complex

"Recommendations:

'A. The conclusion (paragraph IIIC above) regarding the capability under management options 3 and 4 to overcome deficiencies in the current system be considered in the selection of the management option to be adopted.'

"COMMENT - Do not concur. Refer to comments on Recommendation C, Chapter 11.

'B. If option 2 is adopted, it include, as a minimum, that the AFAFPSO be assigned:

'1. The requisite technical capability mutually agreed upon between the SAAMA and DFSC.

'2. The requisite authority to perform all assigned functions.'

"COMMENT - No comment. This is an Air Force matter.

'C. If the Modified option (paragraph IIID above) is selected, that in addition to the requirements of option 2, AFAFPSO and the Army and Navy ICPS be authorized and staffed to conduct direct liaison with DFSC for financial planning and programming matters (including DFSC billing to Services and DFSC payments to contractors) and transportation matters.'

"COMMENT - Do not concur. See all previous comments on the 'Optimum Management Option.'

5. AIR FORCE. The Air Force reply and comments were in Memorandum, Report of the DOD Petroleum Management Study Group, 25 October 1968 and attachments thereto.

"Ref: (a) Assistant Secretary of Defense (Administration) multi-addressee Memorandum, subject: Report of the DOD Petroleum Management Study Group, 9 October 1968.

"In response to reference (a), a review of subject report has been accomplished, with particular attention given to the summary of conclusions and recommendations contained in Chapter 7 and 8. In conducting the review, it was noted that these summaries represent the judgment of the Study Group Chairman (Lt General Robert W. Colglazier, U.S.A., Retired), formed after his evaluation of the report as a whole, and after consideration of the basic information gathered during the course of the study.

"My general observations of the report are as follows:

"a. The report reaffirms the fact that the present system for supply of bulk petroleum products is operationally effective and responsive to the needs of the Armed Forces.

"b. Elimination of the deficiencies and duplications of effort indicated in the report will contribute to improved management.

"c. As indicated in the report, the Air Force Inventory Control Point (ICP) must be properly interfaced with the Army and Navy ICPS and Defense Fuel Supply Center (DFSC) at Cameron Station and must have requisite authority.

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"d. Adoption of the option recommended by the Chairman of the Study Group, in its entirety, is not in the best interest of the Air Force.

"We agree with the majority of the recommendations contained in the individual chapters. However, exception is taken to the following major recommended changes: (1) the establishment of a management fund to finance procurement of bulk petroleum products and related transportation to first point of acceptance by a department stock fund, and (2) the expanded role of DFSC to assume the responsibility for product ordering, distribution planning, and the control of Air Force Aerospace Fuels Field Offices.

"The primary purpose of the proposed management fund is to eliminate purported overlap and duplication of effort concerning the arranging for delivery of product from contractors. The report, however, neither supports these deficiencies by documentation nor does it quantify the benefits to be achieved or reflect an impact on logistics capability, if not implemented. Furthermore, the report does not show the costs involved to implement the recommended changes.

"The Air Force Aerospace Fuels Field Office provide effective and responsible support to the operating commands. Examples are the support provided during the Cuban, Middle East, Korean (Pueblo), and the Southeast Asia crises. These offices also perform liquid propellant support functions and other logistic support functions which are not related to the responsibility of the Defense Supply Agency. Therefore, I do not agree to the placement of these Air Force activities under the Defense Fuel Supply Center.

"On the contrary, the detailed comments contained in the Attachment, concerning Procurement (Chapter 11) and Distribution and Transportation (Chapter 12), show that the present decentralized system of accomplishing the ordering and distribution functions is effective. In my judgment, the proposed centralized system, with power of delegation as desirable, would be less responsive and would create more duplication and overhead.

"Accordingly, I have concluded that the adoption of the recommended changes (i. e., management fund with attendant ordering and distribution functions) would cause another layer of management and financial control to be superimposed over a recognized successful system. It is my firm conviction, therefore, that the objectives of the Secretary of Defense can best be achieved, at the least cost to the Government, by not adopting the option recommended by the Chairman of the Study Group. In lieu thereof, I recommend that only those recommendations contained in the Attachment, with which we have concurred, be adopted. Adoption of those recommendations will correct the deficiencies and eliminate duplication of effort within the present system.

"Comments concerning each of the recommendations contained in Chapters 10 through 19 of the study are attached."

"Chapter 10. Requirements

"Recommendations:

'A. That the determination of mobilization reserve, operating and procurement requirements remain a Service responsibility under any management option selected.'

"COMMENT: Concur.

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'B. That the authorized number of days for mobilization reserve stocks to be prepositioned overseas be the same for all Services and consist of the wartime shipping time plus the minimum safety level specified in JCS, PUB 3.'

"COMMENT: DO NOT CONCUR: While it may be desirable that the authorized number of days for mobilization reserve stocks to be prepositioned overseas be the same for all Services the determination of prepositioned stockage requirements is service prerogative in accordance with DOD Directive 5100.1 and should be retained by the Services.

'C. That ASD (I&L) inform JCS and the Services the results of his mobilization planning with industry and whether or not mobilization reserves in excess of JCS prepositioned authorizations are necessary.'

"COMMENT: Concur.

'D. That operating requirements for ground POL at CONUS posts, bases and stations be reviewed at ICP level only.'

"COMMENT: Concur.

"Chapter 11. Procurement

"Recommendations:

'A. A single DOD organization be given the responsibility and authority to:

'1. Act as the DOD claimant and designated the ordering officer on all contracts. This would include authority to delegate these responsibilities and to conduct direct communications with assigned ordering officers.'

"COMMENT: DO NOT CONCUR:

"1. The ordering system now in effect has been reviewed and substantiated many times. It must be recognized that, as a result of an OASD (S&L) study by Admiral Burton B. Biggs, dated 30 December 1969 the present system was authorized and established. It must be further recognized and established. It must be further recognized that this system is currently authorized in DSAM 4420.1. Since 1960, the current system has proved to be very effective and there is no documentation available to indicate that any serious difficulties have been encountered since its inception.

"2. Careful analysis of the study reveals a failure to either document any deficiency within the current system or to quantify such deficiencies in terms of manpower, personnel or responsiveness.

"3. The only products which are moved by tanker for the Air Force in significant volume are JP-4 fuel and grade 115/145 aviation gasoline. Thus, these are the only products in which the Air Force could compete with another service to obtain a suppliers' production. Statistics covering 1 January-30 June 1968 reveal that no significant amount of competition for product has existed, because 98 percent of JP-4 and 89 percent of grade 115/145 fuel, which was lifted by tanker during such period, was for the sole support of the Air Force. Similarly, there is no significant competition for products which are funded the Army or Navy. For example, all Navy special and JP-5 fuel, loaded aboard tanker between 1 January and 30 June 1968 was for the account of the Navy; while some 99 percent of the automotive gasoline and 73 percent of the diesel fuel, ordered during the same time frame for tanker loadings, was for the account of the Army.

"4. Statistics for the 1 July - 31 December 1968 time frame reveal that the Air Force and DFSC could place orders against only five common JP-4 fuel and five common grade 115/145 aviation gasoline contracts. The amount of product that the DFSC orders from the common JP-4 contracts in relationship to the Air Force varies from 1 to 10 percent. There are far more JP-4 contracts for which the Air Force places orders for delivery by another mode, in addition to tanker, than there are contracts against which the Air Force and DFSC both place orders for loading of tankers (13 to 5). In no case does more than one agency (Army, Navy, Air Force or DFSC) order against any one item of a contract.

"5. The DFSC now has authority and responsibility for selecting the source per DOD Directive 4140.25. If the DFSC should decide that supplier recommendations made by the Air Force are not the most economic the DFSC is not only permitted but is charged with the responsibility for over-ruling the Air Force recommendation. The Air Force ICP keeps DFSC informed of the assets available for loading of tankers by means of a monthly contract status report. This report was established at the request of DFSC in May 1963. In addition, DFSC, based on tanker loadings, also maintains its own daily contract status report.

"6. Authorizing the DFSC to place orders for loading of tankers in behalf of the Air Force would result in the Air Force being unable to insure compliance with inventory and capital controls established by the Office of Secretary of Defense. The DFSC or any other organization outside of the Air Force, if given authority to place Air Force orders for loading tankers, could place orders on a schedule which would be totally unsatisfactory to the Air Force. An ordering officer (outside of the Air Force) not being charged with direct responsibility for meeting established in place, in-transit, and on order inventory levels, would be more prone to accept supplier statements of 'inability to meet specified delivery dates' than would Air Force personnel who have the direct responsibility. Likewise, an ordering officer (outside of the Air Force) would be in a position to order for delivery in advance of a date that would be compatible with Air Force approved programs. Experience reveals that problems have occurred in cases where the Air Force has authorized organizations outside of the Air Force to place orders. For example, the Sub-area Petroleum Officers in Southeast Asia have refused to comply with the Air Force Distribution Plan system and accordingly, compromised Air Force data. A similar situation, if developed under DFSC, by placing orders on behalf of the Air Force, would be unacceptable.

"7. Authorizing DFSC to place orders would not only deny the Air Force the authority and capability for maintaining inventories in consonance with established levels, but also could conceivably place orders on a schedule which would cause inventories to exceed or be under Air Force approved levels. If this occurred, the Air Force would undoubtedly experience difficulty in convincing higher headquarters that DFSC's ordering actions were improper. In summary, the Air Force would be denied the ability to manage its need inventories; although its ICP would be responsible to explain and justify an unsatisfactory inventory position. Additionally, the support capability of the Air Force would be endangered. Past experience indicates that the Air Force has placed great respect upon inviolate mobilization reserve levels. The DFSC, if allowed to place orders, would no doubt be expected to favor economy of resupply actions at the expense of insuring that inviolate inventories are retained.

"8. Authorizing the DFSC to order for the Air Force would also violate a basic principle of logistics that operational Commanders have retained, involving high volume consumption-type items essential to combat activity. For example, when AFLC assumed responsibility for overseas depots in mid 1950, the Commander, USAFF not only insisted that he retain control over aviation fuel and oil stocks (high consumption items) within the theater, but also over ammunition stocks.

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"9. With respect to control over deliveries from contracts (including monthly quotas) the Air Force has a formal procedure in being, which depicts the control of lifting as monitored by the Air Force Aerospace Fuels Field Offices. The study report's inference that exact monthly quotas are necessary is not applicable to the delivery of bulk petroleum products. The very nature of the refining of petroleum product, with its attendant delivery to meet fluctuating demands, provides a necessary flexibility which is inherent to this commodity.

"10. The ordering function is executed by the Air Force through its ICP at Cameron Station and the AFAFFOs. There is no supporting depot system (as in most other commodities), whereby delays in shipment of production can be covered by depot assets. The movement of product requires daily reaction to rapidly changing base and terminal requirements. This changing logistic picture requires a system, which must be highly responsive from (1) the receipt of an order, (2) to the issuance of a schedule against a production source, and (3) to the selection of the most economic and timely mode of transportation. The assumption of the ordering and distribution function by DSA would establish an additional organization layer between the Air Force retail system and the production source.

'A. A single DOD organization be given the responsibility and authority to:

'2. Establish a reporting system for the purpose of monitoring contractor performance. This includes authority to communicate directly with the procurement inspectors, ordering officers and other personnel who have been delegated responsibility requiring direct contacts with the contractors.'

"COMMENTS: CONCUR. Only if improvement over the current reporting system is to be achieved. Added comments are contained in Chapter 11, study reference Page 11-17, V-A1.

'A. A single DOD organization be given the responsibility and authority for:

'3. Funding arrangements to finance procurement and ordering from contracts in such a manner as to permit the above actions without encumbrance to the organization procuring and placing orders under the contracts.'

"COMMENTS: DO NOT CONCUR: Comments are contained under Chapter 14, study reference Page 14-24, V-A.

'B. The policies and procedures concerning the DOD International Balance of Payments be reviewed and revised with a view of achieving a compatible relationship between the procurement guidance and execution of the financial management policies and procedures concerning projection, control and reporting of expenditures of the service stock funds.'

"COMMENT: CONCUR.

'C. The The conclusion regarding the capability under management option 4, to overcome deficiencies in the current system, be considered in the selection of the management option to be adopted.'

"NO COMMENT: This basically is instructions to the Study Group.

"Chapter 12. Distribution and Transportation

"Recommendations:

"A. The conclusion regarding the capability under management Options 3 and 4 to overcome deficiencies in the current system be considered in the selection of the management option to be adopted.'

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"NO COMMENT: This basically is instructions to the Study Group.

'B. If some option other than Option 3 or 4 is adopted, it should include as a minimum:

'1. Granting of full and sole authority to the DFSC for source selection and placing orders on contracts, with the power of delegation as desirable, including the issuance of such distribution plans as necessary.'

"COMMENTS: CONCUR: For source selection only.

"DO NOT CONCUR: For ordering and issuance of distribution plans. Comments are contained under Chapter 11, study reference, Page 11-17, V-A1.

'B. If some option other than option 3 or 4 is adopted, it should include as a minimum:

'2. Providing the DFSC with the control of the funds to obtain and move product to destination.'

"COMMENTS: DO NOT CONCUR: Comments are contained under Chapter 14, study reference Page 14-24, V-A and Chapter 12, study reference Page 12-12, V-B3.

'B. If some option other than Option 3 or 4 is adopted, it should include as a minimum:

'3. Elimination of the duplicating functions of the AFAFFOs. Consolidating and jointly staffing, under the DFSC, the remaining field offices as needed.'

"COMMENT: DO NOT CONCUR:

"1. The report does not:

"a. Contain documentation to specifically support what duplication exists.

"b. Quantify the benefits to be achieved by the recommendation.

"c. Reflect the impact upon the present Air Force Fuels Logistic System if implemented.

"d. Provide any detailed analysis of costs involved to implement the proposed changes.

"2. The Air Force Aerospace Fuels Field Offices were initially established in 1952 when it became obvious that logistic support to the Air Force could not be centrally managed during an accelerated military posture. Subsequent events have consistently validated the requirement for these offices, as currently organized, based upon several independent manpower and organization studies conducted by MAAMA, SAAMA, and Hqs AFLC.

"3. The functions of the Field Offices are many, and cover a range of investigative and management subjects related to all aspects of Aerospace Fuels. With specific reference to petroleum, the following paragraphs (with headings) apply.

"4. Bulk Petroleum WRM Stocks. Because of the large quantities involved, the total WRM requirements cannot be stored on-base. This means that product must be positioned in AF POL Retail Distribution Stations as inviolate stocks and workable plans maintained at all times for delivering these stocks to Air Force bases during hostilities or emergencies. The AFAFFOs are the key to having the AF POL Retail Distribution Station stocks maintained at all times and for coordinating delivery plans with AF POL Retail Distribution Stations, bases, truckers, OEP, state and local authorities. A central CONUS point could not accomplish this program for all CONUS areas because at least some communication facilities can be expected to be inoperative during a national emergency.

"5. Aviation Fuel Procurement Requirements Must Be Determined by Base. The AFAFFOs, by being located in the immediate geographical area, are better able to maintain cognizance of changing base receiving capabilities and activities. This also enables the AFAFFOs to keep abreast with industry changes in the area and to use new facilities to improve distribution methods.

"6. Employment of Direct Shipment Technique. A large percentage of the JP-4 fuel that is procured for support of Air Force CONUS customers flows directly from producers to the using activities. Use of this technique requires that some organization maintain close surveillance over the distribution to insure that industry produces and that transportation is established in consonance with the using activity's requirements because a breakdown in production or transportation can sever the support for a using activity. The office maintaining the surveillance must also be capable of responding instantaneously and arranging support from an alternate source. The direct shipment technique also demands that the managing office be thoroughly familiar with the area geography and facilities because proper routing of product can provide considerable monetary savings. The time differential between the U.S. east and west coasts makes it impossible to provide the required detailed information from a central point without working multiple shifts.

"7. Limited Base Stocks. Most Air Force bases function with five days or less of operating stocks in both the petroleum and propellant areas. This situation demands that extensive coordination be afforded to resupply. In addition, the AFAFFOs must be in a position to immediately establish alternate sources of supply in the event of an interruption at the supply source. Conversely an alternate outlet for production must be found if a base cannot receive after shipment is made; e.g., contamination, tank rupture or cancellation of programmed flying. In the case of hurricanes or similar disasters, resupply is frequently required by alternate routes. Sometimes shipments must be diverted or one AFAFFO must substitute for another.

"8. Specialized Equipment Required. Since bulk petroleum products and propellants managed by the AFAFFOs are liquid and, because many of the propellants are cyogenic in nature, specialized equipment is required for handling and storing these products. The specialized storing and transporting equipment is required for transporting product from the production point to the USAF receiving point and for handling or storing them at the receiving locations. Because only limited pieces of specialized equipment are available, actions by the producers, transporters and receiving activities must be closely coordinated by one focal point which is familiar with the capabilities and limitations of all three.

" 9. Military Demand for Liquid Propellant Approaches Maximum Supply Available From Industry. The demand for liquid missile propellants at times exceeds the available production. The AFAFFO must be available in such cases to maintain constant surveillance and effect maximum coordination between the supplier and the using activities.

" 10. Other Support/Management Organizations for Petroleum and Liquid Propellants are Decentralized or Dispersed Throughout CONUS. Such agencies as the Air Force Systems Command and the National Aeronautics and Space Administration (NASA) employ extensive decentralized organizations. Much coordination is required between these offices and the AFAFFOs in effecting day to day resupply of short items to limited receiving facilities.

" 11. Monetary Savings in Providing Operational Support. AFAFFO personnel by virtue of being in the area develop a degree of area familiarity which it would be impossible for one individual to acquire at a central CONUS location. This area knowledge enable AFAFFOs to better ferret out the cheapest method of supporting the individual activities in the area.

" 12. The report states that Air Force Aerospace Fuels Field Offices duplicate the efforts of the DFSC in reviewing the distribution patterns that are established by DFSC procurement. It is recognized that the DFSC does an effective job in the procurement area. Nevertheless, the Air Force Aerospace Fuels Field Offices frequently find improvements that can be made which provide sizeable savings. For example, DFSC on several occasions awarded contracts to contractors such as MacMillan, Douglass, and Golden Eagle in the Los Angeles area for tanker delivery when these contractors have no tanker loading facility. To accept product from these contractors for tanker loading, the product must be moved by pipeline from these contractors through the Navy Fuel Depot at San Pedro which increases costs and taxes facilities that are already heavily utilized. At the same time these contract awards are being made to MacMillan, Douglass and Golden Eagle, contracts are awarded to Mobil and SOCAL for pipeline delivery to inland locations. Both Mobil and SOCAL have a tanker loading capability. The Air Force as a result of reviewing the distribution pattern established by DFSC procurement, requests the DFSC to amend the contracts to use the MacMillan, Douglass and Golden Eagle product for inland distribution and the Mobil and SOCAL product for loading tankers. The Air Force does not act unilaterally when a change in the distribution pattern is warranted.

" 13. Statement made in para. 5 of Chapter 12 concerning personnel savings is misleading. It implies that 30% or 173 of the 579 personnel who are assigned to the Navy Fuel Supply Office, U.S. Army Petroleum Center and the Directorate of AF Aerospace Fuels could be eliminated through consolidation. The statement ignores the fact that both the Army and Air Force ICPs manage commodities other than petroleum. For example, approximately 124 of the 433 personnel assigned to the Directorate of AF Aerospace Fuels work with liquid missile propellants, chemicals, gases, liquid oxygen tanks and liquid nitrogen tanks. The statement implies that every supervisor, clerk stenographer and clerk typist within three ICPs, including those who work in areas other than petroleum, could be eliminated through consolidation. The statement further implies that all of the AFAFFO personnel who work in the area of distribution of petroleum products could be eliminated through consolidation.

"Chapter 13. Inventory Management

"Recommendations:

'A. That the impact of the management option selected on the inventory management function as shown in Section IV be considered in the overall evaluation of the management options to be recommended.'

"NO COMMENT: This basically is instructions to the Study Group.

'B. That the suggested solution to the problems outlined in paragraph IIIB, 1 through 4, be implemented.

'1. a. Problem - Conflicting directives exist in the area of quality surveillance. The Military Standardization Handbook (200B) for Quality Surveillance, which applies for all Services, is used in the overseas areas, but a similar publication does not exist for CONUS. Each service has its own quality control directives within CONUS.

'b. Solution - Publish a Joint Service directive which would replace the existing Quality Surveillance Handbook 200B on a world-wide basis.'

"COMMENTS: CONCUR.

Recommendations:

'B. That the suggested solutions to the problems outlined in paragraph IIIB, 1 through 4, be implemented.

'2. a. Problem - Although the practice of one Service handling product for another, on a custodial basis, has been used successfully in Europe, Alaska, the Far East and elsewhere, problems are being experienced with the practice in Vietnam. The maintenance of accurate records for receipts, shipments and inventories, is essential to insure an effective resupply, property accounting, and quality control program. Difficulty is being experienced in obtaining documentation of shipments of Air Force-owned product from military terminal to Army, Navy and Air Force using activities in Vietnam. COMUSMACV Directive 701-5 requires a documented monthly stock report be provided to the applicable ICP, however, terminal operating personnel are not fully complying with the directive. This incomplete maintenance of records and reporting seriously compromises the accounting systems.

'b. Solution - The most practicable solution to the terminal inventory reporting problem in Vietnam is to require each of the Services to bill for bulk fuel issues in Vietnam based on the Departmental level agreement. This will relieve the troops in Vietnam of burdensome paperwork. It would be undesirable to require the owning Service to sell its product to the storing Service when it is delivered into terminals because dual billing would constitute duplication of effort. If all Air Force owned aviation fuel would be purchased by the Army as it is delivered into the Army terminals, more than 60% of it would eventually be resold to the Air Force when shipped from the Army terminals to Air Force bases. The Air Force will need to use the information that is submitted on the monthly COMUSMACV report to manage its inventories in the Army terminals.'

"COMMENT: CONCUR.

'B. That the suggested solutions to the problems outlined in Paragraph IIIB, 1 through 4, be implemented.

'3. a. Problem - Some complaints were received by the DOD Study Team during its visit to the Far East to the effect the Army is in the position of having to respond to as many as three different stock report formats at its terminals. This occurs because the Army holds Air Force and Navy owned inventories in addition to its own at some locations and each service requests its stock be prepared on its own format.

'b. Solution - A joint Service publication should be prepared to provide a standard terminal stock reporting format for use by all Services. This

would simplify the reporting function when one Service stores product for another Service on a custody basis.'

"COMMENT: CONCUR.

B. That the suggested solutions to the problems outlined in paragraph IIIB, 1 through 4, be implemented.

'4. a. Problem - An inconsistency exists within the Air Force in that the Base Fuel Supply Office physically handles the accountable records of the Base Supply Officer. The coordination that is required by the two organizations creates duplication of effort. In addition, bulk aviation fuels are funded and managed in the Fuels Division of the AF Stock Fund whereas ground fuels are managed in the General Support Division of the AF Stock Fund.

'b. Solution -

(1) Property accountability for AF bulk ground fuels should be reassigned from the Base Supply Officer to the Base Fuel Supply Officer because the Base Fuel Supply Office has the only physical storage facilities.

(2) Bulk ground fuels for AF should be transferred from the General Support Division - AF Stock Fund to the Fuels Division to preclude the Base Fuel Supply Officer from having to handle bulk fuels under two different divisions of the Air Force Stock Fund. Assignment to the Fuels Division would also provide for central management of mobilization reserve stocks and maximum utilization of storage and distribution facilities for all bulk fuels.'

"COMMENT: DO NOT CONCUR.

"1. In 1966 the Air Force was directed to begin implementation of the DCI Resources Management System (RMS). This system provided that all use of supplies would be recorded as expense of operation at the time of issue to a consuming organization. Charges to expense would then be made at the same time that the charge is made to an O&M appropriation. Inventories of these supplies would be held in working capital accounts (stock fund accounts) until actual issue to a consuming organization. An exception to the general policy was that expense for aviation fuel could be charged at base level on the basis of flying hours rather than actual issue.

"2. The system for aviation fuel in the Air Force was on a complete centralized basis for financial management. No bills were paid at base level either for procurement of aviation fuels by the Air Force Stock Fund or for Sales to consumer appropriations from the stock fund. Ground fuel however, was completely decentralized to base level for financial management purposes. All bills were paid by bases directly from consumer funds. Ground fuel was not in the Air Force Stock Fund.

"3. The Air Force developed a system for the management of supplies at base level under RMS, which provided for the inclusion in the Air Force Stock Fund of all inventories of supplies until issued to a consuming organization. At first it was proposed to put all fuels into the Fuels Division of the stock fund and all other base procured supplies in the General Support Division. Both of these Divisions were assigned to Air Force Logistics Command for management. It soon became apparent that the decentralized financial management of ground fuel was not compatible with the centralized financial management of aviation fuel. Ground fuel was in the Air Force standard base supply system using 1050II computer systems at most bases. To place ground fuel under the accountability of the fuels officer

would have required development of a complete new manual accounting system for this one category of supplies. The system developed for the General Support Division could be used for ground fuel with no additional programming and no additional personnel, while at the same time retaining ground fuel in the base supply computer system. Meetings with the Major Commands during the development phase of the RMS implementation confirmed the thinking of the implementation task group. Most Commands felt that transfer of ground fuel from the AFB (Base Supply) account would be retrogression, in that a manual system would be less efficient, less accurate, and more costly to operate.

"4. The decision was made after all facts were considered; therefore, the Charter for the Air Force Stock Fund was submitted with ground fuel in the General Support Division. The Charter was approved by the Assistant Secretary of the Air Force (Financial Management) and the Assistant Secretary of Defense (Comptroller) on 27 February 1968.

"Chapter 14. Financial Management

"Recommendations:

'A. That if Option 2 or some form of management short of full integrated management is selected, a "Management Fund" be authorized for the Defense Supply Agency to finance funded contracts, to fund orders placed by that Agency and to fund first destination transportation for orders placed by it.'

"COMMENTS: DO NOT CONCUR.

"1. Air Force bulk petroleum is financed through the Fuels Division - Air Force Stock Fund which has been released from apportionment and is under Inventory and Capital Control Procedures. An analysis of the DOD study reveals that the management proposal was recommended primarily to overcome deficiencies in the current system of ordering large volumes of petroleum for movement in ocean going tankers.

"2. Financial Management - A 'management fund' is a limited financial tool originally authorized to each military department for specialized purposes and was limited by:

- 'a. \$1,000,000 capital
- 'b. Financial authority for fiscal year only (no carryover)
- 'c. No provision for standard prices
- 'd. Limited trial balance/fiscal entity

"3. If this fund were established by DSA, an expanded charter would have to be authorized, which would broaden its fiscal scope. DSA (DFSC) would establish a financial management office which does not presently exist. Interchange of fiscal data between the 'management fund' and the military services stock fund would be required. Specifically, DSA would require:

'(a) Cash to establish and maintain the 'management fund' in DFSC. Additional cash would be required by the Fuels Division - AF Stock Fund in order to comply with requirements for prompt payment to the 'management fund' in accordance with Section 408.

"(b) Duplicate:

- "(1) Accounting functions
- "(2) Budgeting and funding functions
- "(3) Standard price computation
- "(4) Ordering functions

"(NOTE: Section 406 does not authorize establishment of a 'management fund' in DSA)

"4. Inventory Management - Air Force flexibility and control over inventories would be reduced. Distribution of inventories would be fragmented into (1) distribution of product to first destination storage points by DFSC, and (2) distribution of products from retail distribution stations by the Air Force. The inventory manager would be denied first hand knowledge of product movement in transit time to storage points and delivery dates. Ability to respond to emergency or urgent requirements would be hampered because of the limited control over the ordering process. These conditions would result in a necessity for a gradual increase in on hand inventories frequent draw-down on WRM stocks and an increase in storage requirements.

"5. Impact - The impact of the imposition of a 'management fund' at DSA/DFSC level over the individual stock funds of the services would add an additional funding level duplicating an already existing structure with which no fault was even suggested. This 'management fund' would also isolate contract managers from the responsibility of being responsive to the individual services's mission oriented logistics needs.

"6. Financial - The Air Force presently funds orders under the Fuels Division - AF Stock Fund. If DFSC were to assume this responsibility, an intermediate financial system would have to be employed. The report recommends a 'management fund' system which is inappropriate because of its financial limitations in law (only one million dollars); therefore, it could not meet the needs of such responsibility. Another financial system would have to be adopted similar to a wholesale stock fund. This stock fund or 'management fund' would (1) have no inventories as assets; (2) not be a fiscal entity in that it cannot establish an adequate standard price in order to maintain a financial break-even point. It would require a complete accounting and budgetary system in DFSC where in effect it would be financing only FOB origin to first destination points or paying bills at FOB destination. This duplication would require additional manpower resources since the military services would still maintain the equivalent of a retail stock fund. In our experience, management funds with multi-service participation are usually confined to short term ventures. We are unaware of any management fund ever being used to buy supplies or materiel for stocks. Use of the management fund in this instance would create an unnecessary and duplicate layer of stock funding and paper work for the wholesale level in what is essentially a retail business. The real wholesalers in the fuels business are the big commercial oil companies.

"Summary Statement:

"7. The recommendation to establish a management fund was based on an effort to facilitate DFSC control over ordering and source selection. However, the study does not support the need for the establishment of a management fund. This was based on the purported duplication and overlap of effort concerning the arranging for delivery of product from contractor. However, the report neither supports

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these deficiencies by documentation nor does it quantify the benefits to be achieved or reflect an impact on logistics capability, if not implemented. In addition, the report does not show the costs involved to implement the recommended changes.

"Detailed comments contained under Chapters 11 and 12 reveals that the purported duplication and overlap of effort does not exist. Therefore, there is no need to establish a management fund, as this would cause another layer of financial control to be superimposed over a recognized successful system, which would create duplication and overlap, with the significant increase in costs to the Government.

' B. That if Option 4 should be adopted as stated in paragraph IVA2, a Defense Fuels Stock Fund Division for bulk fuels should be established with projects corresponding to the present departmental stock fund division, or materiel categories for bulk fuels, to finance fuels from time of order to issue to end-use or authorized customer.

"COMMENT: DO NOT CONCUR: Comments are contained under Chapter 14 study reference Page 14-24, V-A.

' C. The Air Force finance and manage bulk ground and heating fuels at air bases in the same "materiel category" and manner as bulk aviation fuels, as indicated in paragraph IIIB1.'

"COMMENT: DO NOT CONCUR: Comments are contained under Chapter 13, study reference Page 13-17, V-B4.

' D. Actions be taken to improve the quality and timeliness of contracting accounting and reporting for government-owned bulk fuels being delivered commercially on through-put contracts to Southeast Asia as indicated in paragraph IIIB2.'

"COMMENT: CONCUR.

' E. Uniform into-plane issue procedures, forms and machine listing of issues to support bills be developed by the Air Force in cooperation with the other departments and under the policy guidance of OASD(C) as indicated in paragraph IIIB3.'

"COMMENT: CONCUR.

' F. The military departments develop uniform procedures and standard forms for quantitative inventory accounting procedures for use by field activities as indicated in paragraph IIIB4.'

"COMMENT: CONCUR.

' G. The Army and Air Force revise stock fund accounting procedures at posts, bases, and stations for bulk ground and heating fuels to maintain these products in stock fund inventory until issue to end-use to simplify accounting and reimbursement procedures as stated in paragraph IIIB5.'

"COMMENTS: DO NOT CONCUR:

"1. The DOD Resources Management System (RMS) provided that all use of supplies would be recorded as expense of operation at the time of issue to a consuming organization. Pending such issue, supplies would be held in working capital accounts (stock fund accounts).

"2. In the Air Force, many items are issued to service type organizations such as Maintenance, Civil Engineers, Motor Pool, etc. These service organizations use most of the supplies issued to them to do work for other organizations. It is almost impossible for the base supply officer to maintain accountability for all supplies in service organizations. If this were done, every nut, bolt, or other parts and supplies used by mechanics, maintenance men, chauffeurs, etc., would require a formal issue transaction form base supply. Instead base supply issues supplies in bulk to service organizations who, in turn, control the usage of these supplies through work orders, dispatch slips and other forms of job controls. In order to begin operation of PRIME -69 on 1 July 1968, it was decided to charge supplies to the expense account of the service center at the time of issue to the service center. During FY 1969, procedures would be developed to permit transfer of expense from service centers to organizations who receive the benefit of the supplies and services of the service centers. Motor gasoline, oils and lubricants issued to motor pools and heating fuels issued to civil engineers are included in the supplies issued to service centers under the Air Force PRIME -69 system.

' H. Each department review its procedures for procurement of commercial deliveries of bulk fuels directly into military consuming equipment to insure that wherever feasible it is charged directly to appropriations and that other government agencies ordering off bulletin contracts are billed directly as outlined in paragraph IIIB6.'

"COMMENT: CONCUR.

' I. Billing and reimbursements for stock fund issues of bulk fuels in Vietnam be implemented in accordance with the "Memorandum of Understanding - Reimbursements for POL Issues in Vietnam," dated 27 June 1968, between the Comptrollers of the military departments without requirements for additional data to be forwarded by MACV. See paragraph IIIA8.'

"COMMENT: CONCUR. Only insofar as use of the MACV report to accomplish settlement of 'overdue' bills is concerned. The military Services should continue their study of this subject with the aim of developing a more reliable and accurate reporting system.

"Chapter 15. Cataloging and Standardization

"Recommendations:

' A. That the functions of cataloging and standardization of bulk petroleum products remain as currently assigned under management options 1, 2, and 4.'

"COMMENT: CONCUR.

' B. In the consideration of management option 3, the problems mentioned in paragraph IVB above should be recognized.'

"COMMENT: CONCUR.

"Chapter 16. Personnel Requirements and Training

"Recommendations:

' A. That under any management option selected, a more attractive career field for petroleum management specialists be established in each Service and that the authorized grade structure be improved so as to attract and retain qualified petroleum specialists.'

"COMMENT: CONCUR.

'B. That the position of Commander, DFSC, be rotated among all three Services.'

"COMMENT: CONCUR.

'C. That the personnel authorization tables of DFSC be revised to provide for military petroleum specialists in grades 0-4 and 0-5.'

"COMMENTS: CONCUR. However, in order to be consistent with recommendation VB, chapter 16, page 16-8, consideration should be given to increasing the 0-6 authorizations in DFSC to insure that fully qualified personnel in that grade are available to assume command of DFSC as well as providing qualified replacements for JFO and Service Staffs.

'D. That petroleum management offices be placed in the Service's organizational structures so as to report directly to the logistics chief (Director of Materiel G-4 or equivalent).'

"COMMENTS: DO NOT CONCUR: The Air Force has a standard organizational structure for total Supply support at base level. The Fuels Management function is a major segment of this structure. To establish a separate organizational structure solely for Petroleum Management, would be costly in manpower requirements and would not materially improve the operational effectiveness. At the major command level, the standard organizational placement of the Petroleum function is in the Supply and Services area. At the larger commands, where size and workload warrant, the Petroleum function is authorized at division level. At smaller commands, this function is a major segment of the Services division. This organizational structure affords the Air Force maximum operational effectiveness with the minimum manpower cost.

E. Service overseas procurement inspection personnel be included in the DCAS personnel program for rotation and job retention rights.'

"COMMENTS: CONCUR. However, the degree of adoption of this recommendation will depend on the results of an investigation of: Our past sources of recruitment of these personnel; the number and locations of personnel involved; the presence of skills in DSA inspection personnel to perform strictly Air Force work, such as Quality Surveillance; and the need for Service-Oriented work experience.

"Chapter 17. Management of Petroleum during Emergencies

"Recommendations:

'A. In the selection of the management option to be adopted, the conclusion that either option 3 or 4 would provide a more effective coordination of petroleum supply under emergency situations than would options 1 and 2 be given consideration.

"NO COMMENT: This basically is an instruction to the Study Group.

'B. The production planning function and the coordination of petroleum supply under emergency situations be assigned as provided in section IV B preceding.'

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"COMMENTS: CONCUR: Provided that Defense Fuel Supply Center promptly collaborate with the services on all impending emergency situations.

' C. The office of ASD (I&L) be staffed with at least two additional personnel experienced in petroleum logistics.'

"COMMENT: CONCUR.

' D. DOD establish a working group under the direction of DSA to develop a system for obtaining and disseminating petroleum intelligence.'

"COMMENT: CONCUR.

' E. The authorized number of days Prepositioned War Reserve Stocks (PWRS) be the same for all services and consist of shipping time plus minimum safety levels as prescribed by JCS.'

"COMMENT: DO NOT CONCUR: Comments are contained in Chapter 10, study reference Page 10-9, V-B.

"Chapter 18. Overseas Operations

"Recommendations:

' A. That no basic change be made in the JCS directed organization of Joint Petroleum Offices in each unified command or the functions assigned to them.

"COMMENT: CONCUR.

' B. That the resupply requirements of overseas areas continue to be submitted in the form of "slates" directly to DFSC.'

"COMMENT: CONCUR.

' C. That the Services continue to operate the overseas terminals and distribution systems with the maximum of inter-service support.'

"COMMENT: CONCUR.

' D. That long range coordinated planning between the unified commander and the components be accomplished, possibly on five year projections, to insure that overall petroleum storage and distribution facility requirements are adequately considered.'

"COMMENT: CONCUR.

"Chapter 19. DFSC - Service ICP Complex

"Recommendations:

' A. The conclusion, paragraph IV C above, regarding the capability under management Options 3 and 4 to overcome deficiencies in the current system be considered in the selection of the management option to be adopted.'

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"NO COMMENT: This basically is an instruction to the Study Group.

' B. If Option 2 is adopted it includes, as a minimum, that the AFAFPSO be assigned:

"1. If the logistics deficiencies and potential management improvements can SAAMA and DFSC.

"2. The requisite authority to perform all assigned functions.

' C. If the modified option (paragraph IV-E above) is selected, that in addition to the requirements of Option 2, AFAFPSO be authorized and staffed to conduct direct liaison with DFSC for financial planning and programming matters, including billing and payments and transportation matters.'

"COMMENT: CONCUR: The Air Force will staff and give requisite authority to the AFAFPSO (Det 29, at Cameron Station) to perform the responsibilities given that activity. Staffing will be coordinated by USAF with DSA, Army and Navy to insure adequate interface with the service ICP's and DFSC.

6. OASD(C). The OASD(C) reply was by memorandum, Report of the DOD Petroleum Management Study Group, 25 October 1968.

"We have reviewed the subject Study Group Report and the recommendations made therein. We feel that considerable discussion is necessary to clarify our understanding of the operations, deficiencies and potential improvements in the bulk petroleum supply system.

"At this stage we think the following comments are accurate and pertinent:

"1. If the logistics deficiencies and potential management improvements can be corrected and realized through the establishment of central buying and billing, a management fund is feasible.

"2. If the logistics deficiencies can be corrected and if there would be greater improvements realized together with significant economies through integrated stock ownership, then the stock fund is appropriate and is also considered feasible.

"We suggest, as in the cases of previous Integrated Management studies, that a presentation be developed for purposes of helpful discussions."

7. OASD(I&L). The OASD(I&L) reply was by memorandum, Report of the DOD Petroleum Management Study Group, 22 December 1968, and enclosure thereto.

"Subject study forwarded by your memorandum of 9 October 1968, has been reviewed. Our comments will be primarily addressed to the main purpose of the study which was to determine the most efficient and effective way to manage petroleum in the DOD under any one of the four options. In essence, to determine the degree to which the management of petroleum should be consolidated and integrated similar to other common supplies. Recommendations in the study not directly related to the main purpose are listed and commented on in Enclosure 1."

"Findings and Conclusions:

"The Study concludes that the current system is not as effective or efficient as it could be and exposes the following major deficiencies as a result of current management arrangements:

- "1. Inefficient use of contractual assets. (P 6-2; 7-3; 11-10)
- "2. Divided responsibility between DSA/DFSC and the military departments on control and reporting of overseas expenditures affecting the international balance of payments. (P6-2; 7-3; 11-13)
- "3. Lack of single agency control or full knowledge of contractual assets. (P 6-3; 7-4; 12-8)
- "4. Competing defense claimants on the same production source. (P 6-4; 7-5; 12-9)
- "5. An unnecessary amount of duplication in the system. (P-6-4; 7-5; 12-9)

"This office concurs that the above deficiencies exist and that 1) they contribute to inefficiencies; 2) they weaken the system to respond to emergency conditions; and 3) they are directly related to the current fragmented management arrangements.

"The weakness of the current system, as a result of fragmented management is most clearly manifested in the treatment of emergency situations. In both the evaluation section (P 17-15) and in the conclusions (P 7-1), it is recognized that the capability of the system to react under emergency conditions would be enhanced by an integrated arrangement. This agrees with the experience of this office during the recent Middle East crisis. As a matter of fact, the unilateral action taken by the Navy during that period (P 17-9), could very well have adversely affected the supply of fuels for the other departments.

"In further regards to the capability of the system under emergency conditions, it is interesting to note that CINCPAC has recommended an integrated management arrangement, with single stock ownership in overseas areas. This appears to me to be too important a point not to be reflected in the study. It would seem that the opinion of the Unified Commander, who not only has the most difficult petroleum problems, but is also prosecuting a war, should be considered in the final decision. The CINCPAC position was based on SEA experience and the critical nature of petroleum to military readiness. CINCPAC pointed out these problem areas now being encountered:

- "1. POL requirements must now be submitted to four agencies (DFSC and 3 ICP's).
- "2. Accounting, reporting, pricing, etc., vary by service. Combat zone accounting procedures require simplification.
- "3. Procurement inspection is not centralized or standardized. Quality surveillance programs are extremely limited in forward areas.
- "4. Longer range changes in product requirements (operating and war reserves) are not readily accompanied by facility construction programs, both commercial and military.

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"CINCPAC also pointed out that increased centralization would greatly assist in resolving current problems by:

- "1. Providing a single point for submission of requirements.
- "2. Standardization of bulk POL handling, terminaling, accounting, pricing, and quality control procedures.
- "3. Use of computer-oriented management tools could be expanded when proliferation of management agencies is reduced.
- "4. Reallocation of terminal tankage between products now managed by different services (i.e., Avgas to JP-5 or Mogas to JP-4), could more easily be accomplished to meet the needs of the Unified Commander or the stock fund manager.
- "5. PWRS levels could be established by the services and one agency would then be responsible for maintaining the stock funded PWRS levels. This would materially aid field commands now holding PWRS for three services based on three or more documents which are sometimes contradictory.

"The findings and conclusions on cost savings are not identified in as specific terms as we would like. However, the potential for cost savings by an integrated arrangement is recognized. (P 7-2; P 12-10) that cost savings do result from the consolidation and integration of supply activities, agrees with the past experiences of this office.

"Selection of Management Options:

"Option 1 - Status Quo. This office concurs in the treatment of this option. (P 7-10)

"Option 2 - Standardization of ICP's. This office concurs in the treatment of this option. (P 7-10)

"Option 3 - Single Manager. This office concurs in the treatment of this option. (P 7-11)

"Option 4 - Integrated Management under DSA. The study concludes that the adoption of Option 4 would provide the means to overcome the deficiencies in the system. (Par. 2, Page 7-13) This office concurs with that conclusion.

"The study also concludes however, that Option 4 would create major problems in functional areas which are now being performed effectively. (Par. 2, Page 7-13) This office can find no basis for, and does not concur with that conclusion. The study only broadly alludes to such problems. It neither explains them, nor does it examine any of them for the purpose of determining whether the alleged problems are real or imaginary. The functions enumerated are functions which DSA has demonstrated a capability to perform for other common supply items. This office can find no reason why DSA could not perform these functions effectively for bulk petroleum items.

"Option 5 - Optimum Option. This option should be considered, only after Option 4 has been discarded. It is my opinion that this option only partially corrects the problems in the system, departs from established DOD policy for common item management, has no advantages over Option 4, and has these disadvantages:

- "1. Creates an additional fund (Management Fund) under DSA, while still perpetuating the three wholesale petroleum stock funds under the military departments.

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"2. Perpetuates the existence of the 3-departmental ICP's, all with their separate overhead and overlapping functions. This will, in effect, continue the "root" causes for deficiencies in the current system i.e., fragmentation of responsibilities.

"3. This option will not correct the following problem areas exposed by the study, which would be corrected if complete integration under Option 4 were adopted:

"a. Need to improve the coordination between ICP's and DFSC.
(P 6-3; 7-4; 7-11; 11-15; 19-4)

"b. Conflicting directives on quality surveillance. (P 6-6; 13-13)

"c. Accounting problems in Vietnam. (P 6-6; 7-7; 13-14; 14-23)

"d. Lack of standardization in terminal reporting. (P 6-6; 6-12; 7-5; 7-7; 13-14)

"e. Need for operating agency to do production planning. (P 6-10; 17-12)

"f. Need for integrated management in emergencies. (P 7-1; 17-12)

"g. Unnecessary duplicating overhead in ICP's (P 12-10)

"Summary:

"A summary analysis of the study indicates that the system of petroleum management within the DOD is not as efficient as it could be as a result of the current fragmented management arrangements; that current deficiencies could be corrected by an integrated management arrangement; that an integrated arrangement would be necessary during emergency conditions; and that savings in personnel and funds would be realized by an integrated arrangement."

"Recommendations:

"The recommendation of the study for the adoption of an 'Optimum Management Option' (Par A, Page 8-1) is not considered compatible with the findings and conclusions of the study. The study concludes that Option 4 (DSA Integrated Management) 'would provide the means to overcome the deficiencies cited in the basic report', but contends that DSA would encounter problems in six functional areas under such an arrangement. The basic report does not identify, examine or support such a contention. Further, neither this Office or the DSA considers the six areas as problems under Option 4.

"The selection of a management option really fulfills the purpose of the study, i.e., to determine the degree to which the management of petroleum should be consolidated and integrated similar to other common supplies. In view of the general unacceptability of the study recommendation pertaining to the selection of a management option (Par A, Page 8-1), this office recommends that this matter be held open and put before the Joint Logistics Review Board, when established.

"This office concurs with the study recommendation pertaining to improving the interface between DFSC and the Service ICP's (Par B, Page 8-1) and the recommendation pertaining to improvement actions not directly related to a management option (Par C, Page 8-1).

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"Recommendations Not Related to a Management Option:

'1. That the authorized number of days for mobilization reserve stocks to be prepositioned overseas be the same for all Services and consist of the wartime shipping time plus the minimum safety level specified in JCS, Pub 3. (P 10-9)'

"COMMENT: CONCUR. This office will initiate action to accomplish this recommendation.

'2. That ASD (I&L) inform JCS and the Services the results of his mobilization planning with industry and whether or not mobilization reserves in excess of JCS prepositioned authorizations are necessary. (P 10-9)'

"COMMENT: Same as for number 1 above.

'3. That under any management option selected, a more attractive career field for petroleum management specialists be established in each Service and that the authorized grade structure be improved so as to attract and retain qualified petroleum specialists. (P 16-8)'

"COMMENT: No comment. The whole chapter on 'Personnel Requirement and Training' appears to overemphasize a possible uniqueness and importance of career progression in the petroleum field. ASD Manpower should implement any actions resulting from this recommendation or recommendation 4, 5, 6 and 7.

'4. That the position of Commander, DFSC, be rotated among all three Services. (P 16-8)'

"COMMENT: Same as number 3 above.

'5. That the personnel authorization tables of DFSC be revised to provide for military petroleum specialists in grades 0-4 and 0-5. (P 16-8)'

"COMMENT: Same as number 3 above.

'6. That petroleum management offices be placed in the Service's organizational structures so as to report directly to the logistics chief (Director of Materiel).'

"COMMENT: Same as number 3 above.

'7. Service overseas procurement inspection personnel be included in the DCAS personnel program for rotation and job retention rights. (P 16-8)'

"COMMENT: CONCUR.

'8. The office of ASD(I&L) be staffed with at least two additional personnel experienced in petroleum logistics. (P 17-15)'

"COMMENT: This recommendation is under study. Any action necessary will be initiated by this office.

'9. DOD establish a working group under the direction of DSA to develop system for obtaining and disseminating petroleum intelligence. (P 17-16)'

"COMMENT: No comments.

'10. That no basic change be made in the JCS directed organization of Joint Petroleum Offices in each unified command or the functions assigned to them. (P 18-14)'

"COMMENT: CONCUR. No action required.

'11. That the resupply requirements of overseas areas continue to be submitted in the form of "slates" directly to DFSC. (P 18-14)'

"COMMENT: CONCUR. No action required.

'12. That the Services continue to operate the overseas terminals and distribution systems with the maximum of inter-service support. (P 18-14)'

"COMMENT: CONCUR. No action required.

'13. That long range coordinated planning between the Unified Commander and the components be accomplished, possibly on five year projections to insure that overall petroleum storage and distribution facility requirements are adequately considered. (P 18-14)'

"COMMENT: CONCUR. The Joint Staff should implement any action resulting from this recommendation.'

8. DSA. The DSA reply was by memorandum, Report of the DOD Petroleum Management Study Group, 5 November 1968 and enclosure thereto.

"1. Reference OASD(A) Memorandum, dated 9 October 1968, subject as above.

"2. In accordance with above referenced memorandum, the subject study has been reviewed and the following comments are furnished:

"a. Option 1 (Status Quo) and Option 2 (Status Quo plus internal changes in Military Department ICPs) would not solve the problems nor serve the purpose for which the study was intended and, therefore, were not considered.

"b. Option 3 (Establishment of Single Manager under one Military Department) represents a type of management that was eliminated in DOD when DSA was established for integrated management of common items, and, therefore, was not considered.

"c. Accordingly, DSA considered Option 4 (Integrated Management under DSA), and the Optimum Management Option, recommended by the Chairman of the Study Group. From the DSA point of view, both of these options would result in the accomplishment of at least some of the objectives of the study effort; i.e., to provide a more effective and efficient management system for bulk petroleum products. However, neither of the options would resolve all of the problems identified as inherent in the current system.

"d. Analysis of the report identifies 43 specific problem areas, 21 of which would not be eliminated by any of the five options. Of the 21 that would not be eliminated under any option, 2 are of particular interest to DSA - (1) the need for direct communication between overseas inspection personnel and the DSA contracting officer, and (2) integration of overseas civilian procurement inspectors into the DSA/DCAS personnel management program to provide necessary rotation and job retention

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rights. Of the remaining 22, all would be resolved under Option 4 and only 11 under the Optimum Management Option (see Enclosure 1). Elimination of the remaining problem areas under the Optimum Management approach would require agreement among the Military Departments and DSA to procedural changes.

"e. The report concludes that Option 4 'would provide the means to overcome the deficiencies cited in the basic report but would also create major problems in functional areas which are now being performed effectively,' and further concludes that problems would be encountered if DSA were assigned certain of these functions. Speaking specifically to the six areas cited as problems if assumed by DSA, it is pointed out that:

"(1) Administration and control of stocks in CONUS and overseas terminals is not an intended function of ownership under Option 4. This is substantiated in the findings and conclusions contained in the report. Control of these stocks would continue to be vested in the unified commanders and the Military Departments.

"(2) Operational control of the wholesale (terminals) distribution system need not be changed under the integrated management concept and this Headquarters would not recommend such a change.

"(3) The report does not envision that responsibility for computation of requirements for system stockage would be assigned to DSA under Option 4. Rather, this function would remain with the unified commanders and the Military Departments. DSA as the integrated manager would continue to consolidate requirements submissions for procurement actions.

"(4) The report does not imply that DSA would budget for bulk petroleum. Findings and conclusions in support of Option 4, as contained in the report, envision Military Department budgeting for their bulk petroleum requirements and DSA central funding for procurement and transportation to first destination. This arrangement, in fact, should simplify the Military Departments budgeting operation.

"(5) Complete control of distribution and redistribution by DSA is not envisioned under Option 4 according to the report. Distribution and redistribution promulgated by DSA would continue to be subject to user coordination and concurrence with delegation of responsibility to the Military Departments, as desirable (e.g., movement of product from contractor direct to the post, base, and station level under Bulletin type contracts).

"(6) Arrangement of transportation from point of storage to consumer by DSA is not implied in the report as a function intended for DSA under Option 4.

"Therefore, this Headquarters does not consider these six areas as problems under Option 4 (DSA Integrated Management). For that matter the Optimum Management Option recommended may create new problems which do not exist under Option 4 such as the requirement for the integrated manager to control and operate a management fund in addition to a stock fund.

"3. Adoption of either Option 4 or the Optimum Management Option would result in augmentation of the DSA mission. Consequently, the decision is one which should be made by OASD and the Military Departments, and is a decision in which DSA should not take a position at this time. However, if either Option were to be adopted, this Agency is capable of assuming the additional mission responsibilities providing the resources associated with the expanded workload are made available."

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(Enclosure 1 to DSA Reply)

ANALYSIS OF 43 SPECIFIC PROBLEM AREAS CITED IN REPORT

Item No.	Problem	Reference	Correctible		
			OMO	Opt 4	Neither
<u>Requirements</u>					
1	Determine MOB Reserve	Vol II, Page 10-9	-	-	X
2	Pre-Positioned MOB Reserve No. Days Same All Services	Vol II, Page 10-9	-	-	X
3	ASD (I&L)/JCS and Services Communication in MOB Planning	Vol II Page 10-9	-	-	X
4	Oper Req Ground Products in CONUS be Reviewed by ICP only	Vol II, Page 10-9	-	-	X
<u>Procurement</u>					
Single DOD Org Act As:					
5	DOD Claimant & Designate Ordering Officers	Vol II, Page 11-17	X	X	-
6	Establish Reporting Sys to Monitor Contract Per- formance	Vol II, Page 11-17	X	X	-
7	Funding Arrangement to Finance Procurement	Vol II, Page 11-17	X	X	-
8	IBOP Procedures	Vol II, Page 11-17	X	X	-
<u>Contract Administration</u>					
Overlap and Duplication					
9	Tanker Contract Lack of Product Demand Info	Vol II, Page 11-12	X	X	-
10	Contractor Allocates Product	Vol II, Page 11-12	X	X	-
11	Duplicating Actions in Contr Source Selection	Vol II, Page 11-12	X	X	-
12	Direct Communication Over- seas Insp/DFSC Lacking	Vol II, Page 11-12	-	-	X
13	Long Term Contracts	Vol II, Page 11-13	-	-	X

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(Enclosure 1 to DSA Reply Continued)

Item No.	Problem	Reference	Correctible		
			OMO	Opt 4	Neither
14	Interface Between ICP's and DFSC	Vol II, Page 11-15 Vol II, Page 19-4	-	X	-
<u>Distribution and Transportation</u>					
15	No Single Agency Full Control or Knowledge All Contract Assets	Vol II, Page 12-8	X	X	-
16	Competing DOD Claimants on Same Production Source	Vol II, Page 12-9	X	X	-
17	Duplication in System	Vol II, Page 12-9	X	X	-
18	Lack of Fund Control in DFSC	Vol II, Page 12-10	X	X	-
19	Personnel Savings Through Integration	Vol II, Page 12-10	-	X	-
<u>Inventory Management</u>					
20	Quality Surveillance Conflicting Directives; Overseas vs CONUS	Vol II, Page 13-13	-	X	-
21	Vietnam - Interservicing	Vol II, Page 13-14	-	X	-
22	Overseas ISSA's - Stocking of Another Service Owned Product	Vol II, Page 13-14	-	X	-
23	AF Inconsistency Base Supply Off vs Base Fuel Supply Off.	Vol II, Page 13-14	-	-	X
24	Overseas Inv Management	Vol I, Page 6-5	-	X	-
<u>Financial Management</u>					
25	Multiple Stock Funds for AF Fuels	Vol II, Page 14-20	-	-	X
26	Govt Owned Fuels in Possession of Contractors	Vol II, Page 14-21	-	X	-
27	Simplify and Standardize Into-Plane Billings Between Depts	Vol II, Page 14-21	-	-	X

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(Enclosure 1 to DSA Reply Continued)

Item No.	Problem	Reference	Correctible		
			OMO	Opt 4	Neither
28	Standardization of Inv Forms and Reports	Vol II, Page 14-22	-	X	-
29	Use Local Source Fund to Finance Local Inv	Vol II, Page 14-22	-	-	X
30	Direct Billings to Appropriation	Vol II, Page 14-22	-	-	X
31	Long Term Contract Funding	Vol II, Page 14-22	-	-	X
32	Reimbursement for POL Issues in RVN	Vol II, Page 14-22	-	X	-
<u>Personnel Requirements and Training</u>					
33	Establish More Attractive Career Field	Vol II, Page 16-8	-	-	X
34	Rotate DFSC Cdr Among Services	Vol II, Page 16-8	-	-	X
35	DFSC Auth Tables Revised to Provide Pet. Spec 0-4 and 0-5	Vol II, Page 16-8	-	-	X
36	Pet Mgt Offices Report to G-4 etc.	Vol II, Page 16-8	-	-	X
37	Rotate Overseas Procurement Inspection Personnel	Vol II, Page 16-8	-	-	X
<u>Mobilization Planning</u>					
38	ASD (I&L) Coord with Other Departments	Vol I, Page 6-10	-	-	X
39	Production Planning with Industry	Vol I, Page 6-10 Vol II, Page 17-12	-	X	-
40	Emergency Operations	Vol II, Page 17-12	-	X	-
41	Augmenting OSD Pet Staff	Vol II, Page 17-10	-	-	X
42	Intelligence Data	Vol II, Page 17-14	-	-	X
43	Minimum PWRs Levels	Vol II, Page 17-14	-	-	X

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9. CINCPAC. The CINCPAC comments pertaining to Petroleum Management were contained in a letter to the Chairman, JLRB, dated 5 January 1970. This letter is quoted below:

a. "This letter is in response to your recent request for my views with respect to the centralization of petroleum logistics management responsibilities at the Washington level.

"There is a high degree of interdependence among the Services in all phases of petroleum logistics from the development of petroleum product specifications to final issue of those products to consuming units in the field. Interservice Support Agreements (ISSAs) covering such diverse areas of POL operations as procurement and consignment, inspection, storage, and distribution are negotiated at both departmental and field Headquarters. That fact, coupled with the commonality and tremendous consumption of major POL items, dictates that all aspects of petroleum logistics be coordinated effectively and managed uniformly both within the theater and in Washington.

"At the theater level, the unified commander must insure that bulk POL distribution and supply are integrated in a manner which provides the most efficient utilization of facilities, supplies, and manpower, and assures dependable and responsive POL support to forces assigned to his command.

"To this end CINCPAC found it necessary to take directive action such as the assignment of port and depot support responsibilities, (enclosure (1)) and the establishment of a realistic POL tankage objective (enclosure (2)), to insure the effective coordination of bulk POL supply to the rapidly expanding forces in Vietnam. (Enclosure 1, CINCPAC message 241945Z April 1965 and Enclosure 2, CINCPAC message 132356Z November 1965 are Secret messages and are not quoted in this appendix.)

"It was against this background that CINCPAC made the recommendation, contained in enclosure (3), that consideration should be given to centralizing POL management, either under one of the Services or as a staff office under the JCS. (Enclosure 3, CINCPAC message 132200Z July 1968 at time of dispatch was classified Secret. This message was downgraded to Unclassified by CINCPAC message 050448Z November 1968 and is quoted in paragraph 9b below.)

"While I concur in the need for more effective interdepartmental coordination of POL logistics management at the Washington level, I would prefer to see this accomplished without further diminishing Service responsibilities. I think that this objective could be achieved by reconstituting the Joint Petroleum Committee and providing it with a Secretariat, which would function as the central policymaking, planning, and coordinating staff for POL matters through the Department of Defense. The committee and its Secretariat should operate under a charter from JC3, thus insuring the application of firm military control over POL logistics functions.

It was this position which was set forth by staff in the point paper, dated 24 September 1969 (enclosure (4)), which was furnished to the Joint Logistics Review Board. I recommended that you give it careful consideration during your deliberations concerning POL management." (Enclosure 4, a CINCPAC Point Paper, Subject: Centralization of POL Management Functions, is quoted in paragraph 9c.)

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b. CINCPAC message Management of Petroleum, dated 132200

July 1968 referred to in paragraph 9a above follows:

"A. JCS 03592/281335Z JUN 68

"B. JCS PUB 3, SECTION XVI

"C. DSAM 4220.1

"D. DA WARX 90906 OF 14 OCT 1948

"1. Ref A requests preliminary comments and rationale on four options for improving POL management worldwide. These options to be evaluated by a study group now underway.

"2. A study such as outlined in Ref A can be beneficial. The timing is appropriate in that many of the lessons learned in Southeast Asia can be evaluated in perspective as related to petroleum management functions and practices in Washington and in the unified command area.

"3. Based on sea experience, the concept of centralized world-wide management of bulk POL remains valid. This concept is the outgrowth of experiences and lessons learned in past wars in management of POL as a critical commodity, large in volume but limited in supply, possessing extensive commonality in use, transport and handling characteristics. The close association of POL supply availability and military readiness requires the continuing attention of the unified commander and his regional subordinates as now exercised through the CINCPAC Joint Petroleum Office (JPO) and PACOM Sub-Area Petroleum Office System. This system, including the incorporation of DFSC, reflects organization and functional developments since 1948 when the joint petroleum offices were established by Ref D. Refs B and C provide guidance.

"4. Examination of the four options discussed in Ref A points up certain problem areas now encountered by the unified commander.

"A. POL requirements must now be submitted to four agencies (DFSC and three ICPS).

"B. Accounting, reporting, pricing etc., vary by service. Combat zone accounting procedures require simplification.

"C. Procurement inspection is not centralized or standardized, quality surveillance programs are extremely limited in forward areas.

"D. Longer range changes in product requirements (operating and war reserve) are not readily accompanied by facility construction programs, both commercial and military.

"5. Increased centralization of POL management, including centralized POL stock and service contract funding, could greatly assist in resolving the above problems by:

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- "A. Providing a single point for submission of requirements.
- "B. Standardization of bulk POL handling, terminaling, accounting, pricing, and quality control procedures.
- "C. Use of computer-oriented management tools could be expanded when proliferation of management agencies is reduced.
- "D. Reallocation of terminal tankage between products now managed by different services (ie: AVGAS to JP-5 or MOGAS to JP-4) could more easily be accomplished to meet the needs of the unified commander or the stock fund manager.
- "E. PWRS levels could be established by the services and one agency would then be responsible for maintaining the stock funded PWRS levels, this would materially aid field commands now holding PWRS for three services based on three or more documents which are sometimes contradictory.
- "6. Any changes in organization and functions must include recognition of the need for quick military logistical response by providing direct communications in POL supply, transport and allocations matters between the unified commander and the petroleum control agency/agencies in Washington.
- "7. The organizational placement of the centralized POL management office, which the four options in Ref A address, should take into account the military aspects of controlling POL. Currently the service ICPS act as a check and balance system to the DSA Central POL Procurement Agency (DFSC). If the ICPS and DFSC are merged in some form, consideration should be given to placing the resulting organization under direct military organizational control (under either one of the services or as a staff office under JCS).
- "8. It is requested that the findings of the study be provided CINCPAC for comment."

c. The CINCPAC Point Paper, Centralization of POL Management Functions, J44, 24 September 1969/39-390, referred to in paragraph 9a above, is quoted below.

"REFERENCES

- "(a) CINCPAC 132200Z Jul 68
- "(b) Report of the Petroleum Management Study Group (Colglazier Report)

"STATEMENT OF PROBLEMS

- "1. To provide the CINCPAC position relative to worldwide petroleum organization.

"FACTS BEARING ON PROBLEM

- "2. Although the supply of petroleum and the response of petroleum agencies has been most satisfactory throughout the build-up of forces in SEAsia, certain problems in management have been observed.

"DISCUSSION

"3. The JPO-SAPO system has proven most satisfactory in response and direction of resupply of petroleum. This organization, as a member of the Unified Commander's and his sub-command staffs, provides the necessary direct communication required to be responsive to the commander's desires. The system should remain status quo.

"4. The existing inter-service arrangements for intra-theater handling and distribution of bulk POL have worked well. Under these arrangements however, ownership and custody are frequently with different Services. This is particularly true between Army and Air Force due to the Army having the inland distribution responsibility for bulk POL outside of CONUS. This has created major problems in inter-service bulk POL reporting and accounting. Standardized reporting and accounting procedures for bulk POL which would include a simplified procedure for reconciling inter-service transfers within designated combat zones would resolve most of these problems and make the system manageable in a wartime environment.

"5. Prior to 1954, coordinated action in the development and implementation of DOD petroleum policy, plans and programs was achieved through the medium of the Munitions Board Joint Petroleum Committee (MBJPC) and its Secretariat which was jointly staffed and headed by a Flag or General Officer. The MBJPC together with its Secretariat was governed by a charter promulgated by the JCS. Under this charter it served as the central policy and planning agency for all of the petroleum programs of the Department of Defense and represented the DOD on petroleum matters with other governmental agencies. It functioned effectively in this role until the MBJPC was disestablished and its Secretariat was taken out from under military control and reorganized as the Petroleum Division of OASD (I & L). It has since gone out of existence.

"6. A centralized agency, under military control, would provide the authority and rank necessary to implement and pull together these and other important areas. It must be emphasized that this organization be placed under military control in order to remain responsive to the JCS. If this is prohibited, then no change or centralization is recommended for, although the existing system has weaknesses, it is and has been responsive.

"7. Except as discussed in the centralization and recommended organization, the Services would continue to retain their existing responsibilities. This would include training of personnel and operation of facilities and mission as assigned within existing commands.

"RECOMMENDATIONS

"8. That the JLRB consider the advantages and disadvantages of a Military Petroleum Logistics Agency (MPLA) under the authority, direction and control of the Joint Chiefs of Staff, in light of the factors above."

10. PRELIMINARY VIEWS AND RATIONALE OF THE SERVICES AND UNIFIED COMMANDS.
The JCS representative assigned to the Study Group requested that the Services and unified commands provide their preliminary views and rationale of the four management options that the Study Group would consider. That message and replies thereto are identified by activity and quoted in this paragraph.

a. JCS message (J-4) 3592, Management of Petroleum, dated 28/1335 June 1968, requested the preliminary views and rationale.

"REF: SEC DEF MEMO, DTD 21 JUNE 1968 (NOTAL)
SUBJECT AS ABOVE

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"1. Sec Def has tasked ADS (A) by referenced memorandum to undertake a complete and comprehensive study on a worldwide basis to determine the most efficient and effective way to manage petroleum in DOD. The precept prescribes that DOD should be able to realize considerable savings through some form of consolidation of management similar to that established in other areas of common supply and services.

"2. At a minimum, the study will consider the following options, including possible cost savings:

"A. Continuing status quo.

"B. Continuing status quo, plus internal changes in the inventory control points (ICP) of the military departments at Cameron Station to insure standardization of ICP responsibilities, functions, and procedures.

"C. Establishing a single manager arrangement under one military department to assure management responsibilities and functions now assigned to the Departments and DSA.

"D. Expanding DSA'S responsibilities and functions to assume petroleum management responsibilities and functions now assigned the military departments.

"3. Most functional areas of petroleum management will be evaluated, including operational effectiveness and responsiveness. The study is concerned with the management of bulk rather than packaged petroleum products.

"4. To provide appropriate input to the OSD study your preliminary views and rationale on the options offered in paragraph 2 are requested by 15 July 1968. Subsequent requests for comments and recommendations may be required prior to completion of the study."

b. CINCAL letter, J-4 Management of Petroleum, 11 July 1968 responded:

"1. Reference. JCS Unclassified Message, DTG 281335Z June 1968, subject as above.

"2. The headquarters has reviewed the four petroleum management options in the referenced message and submits the following preliminary views on these options:

"a. Continuing status quo. Although the system is working, there are various management improvements which could be made: standardization of methods of funding and payment for procurement of petroleum by all departments, strengthening and extending the scope of quality control and surveillance to the lowest departmental echelons, extending logistic responsibilities to include petroleum-related chemicals and cryogenics for all departments as is now done in the Air Force, returning logistic responsibilities for packaged products to petroleum activities rather than retaining them in general supplies, and developing fully the procurement and training of personnel to provide for their systematic career progression.

"b. Continuing status quo, plus internal changes in the inventory control points of the military departments to insure standardization of responsibilities, functions, and procedures. This option may solve many of the current problems although duplication of effort will probably remain. It may, however, be difficult to achieve much standardization without standardizing other facets of departmental policies and procedures. This standardization would be worth the effort, for the departments would be assured continuous control over their own resources.

"c. Establish a single manager arrangement, under one military department to assume management responsibilities and functions now assigned departments and DSA. A single manager arrangement of this type is applicable when one department has a well-functioning organization, diverse operations, and a majority interest in the activity to be managed. Other departments then provide personnel to round the organization out to provide for their operations and minority interests. Petroleum does not fall into this category for all departments qualify fairly equally regarding organization, diversity of operations and interest. Although some may deal in larger volumes than others, volume alone need not be a criteria for controlling interest.

"d. Expanding DSA's responsibilities and functions to assume petroleum management responsibilities and functions now assigned the military departments. This option offers consolidation and standardization of management functions at the wholesale level with conceivable savings in both money and effort. A wholesale stock fund operated by a DSA petroleum activity should be more efficient with standard accounting procedures and cost computing methods. Requirements should continue to be computed and budgeted by the several departments with procurement remaining with the DSA petroleum activity. Logistic operations should be directed by military personnel on a rotating service basis and the civilian-military staffing ration should be sufficiently high on the military side to insure complete familiarity, understanding, and appreciation of the individual military commanders' problems regarding petroleum supply."

- c. USCINCEUR message, ECJD-00 10250, dated 120815 July 1968 responded:

"For J-4 petroleum branch (JCS), subj: Management of petroleum, reference: JCS MSG UNCLAS 03592 DTG 280135Z JUN 68, in response to the referenced message... recommend continuing the status quo based on the proven effectiveness and responsiveness for the present system in this theater."

- d. CINCLANT message 4020, Management of Petroleum, dated 151942 July 1968 responded:

"A. JCS 281335Z of JUN 68

"1. In response to Ref A, it is considered that the present management of petroleum logistics is both effective and responsive to operational readiness.

"2. Due to the unique requirements and technical knowledge necessary to adequately support the Navy with NSFO, JP-5 and marine distillate; the Air Force with JP-4, thermal stable fuel and missile propellants and the army with mogas and cite fuel, it is believed option 2B of Ref A will be the most productive in conducting the study,

"3. The following comments are offered for consideration by the services during the study:

"A. Administrative and financial procedures within each service should be reviewed for any possible duplication between the ICP and lower echelons.

"B. Ration of military to civilian personnel in the ICP'S and DFSC should be reviewed in order to ensure adequate trained military personnel during limited war situations (I. E., Viet Nam) and to provide billets for career progression in the petroleum management area."

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e. USCINCSO message SC2299FJ, Management of Petroleum, dated 162125 July 1968 responded:

"REF: JCS 03592 J4 281335Z JUN 68 (NOTAL)

"1. By reference JCS advised that ASD(A) has undertaken study to determine most effective way to manage petroleum in DOD. Precept of study is that DOD should be able to realize considerable savings through consolidation of management similar to that established in other areas of common supply and services. It was indicated that the study, as a minimum, will consider the following options:

"A. Continue status quo.

"B. Continue status quo plus internal changes in military department ICP'S to insure standardization of ICP responsibilities, functions and procedures.

"C. Establishment of single manager under one military department to assume management responsibilities now assigned to DSA and military departments.

"D. Expand DSA responsibilities and functions to assume petroleum management responsibilities and functions now assigned to the military departments.

"2. USSOUTHCOM is in agreement with precept of study. However USCINCSO is concerned that any reorganization which might result from such a study could reduce adequacy and responsiveness of petroleum support of forces assigned to unified commands under both normal and emergency conditions, such matters as establishment, review and drawdown of PWRs should be clearly defined and clarified under any such reorganization, specific comments concerning options referred to in reference follow.

"A. Options A and B - USSOUTHCOM considers existing organization to be responsive to the needs of the Unified command but would not interpose objection to internal changes within the ICP'S intended to effect further standardization of responsibilities, procedures, and functions.

"B. Option C - USSOUTHCOM considers that such an arrangement would be impractical, since such a single manager would be responsive for performing inventory control functions, including allocation of products and facilities, for all the military departments.

"C. Option D - A review of responsibilities of DSA and the military services indicates that from a management standpoint the responsibilities currently exercised by the military departments are (1) ownership of bulk petroleum products (2) determination of service bulk petroleum requirements (3) computation of mobilization material requirements for bulk petroleum products (4) computation of current zone of interior military petroleum products resupply requirements for tanker and barge movement and their submittal to the DFSC for supply action (5) establishing and maintaining pre-positioned reserve stocks. USSOUTHCOM considers that those functions referred to above must be responsive to service requirements and that any reorganization should provide for such responsiveness."

f. CINCSRIKE message STRJ4-P 5355, Management of Petroleum (for J-4) dated 031526 July 1968 responded:

"Reference: JCS MSG UXL 03592, J4 Sends, 281335Z JUN 68,

"1. USSTRICOM has no established logistic system in MEAFSA area and therefore no operational experience with the current petroleum management

organization, DFSC and service ICP'S have been most responsive to requests for information and planning assistance.

"2. The current organization appears to provide an optimum solution to divergent requirements of centralized control and service logistic responsibilities, MEAFSA plans rely primarily on service units for operation of in-country POL systems, any reorganization which reduces the service responsibility or disperses the expertise available to the services must eventually affect the service capability to field qualified POL systems operating units. Options 2C and 2D of reference message impact in this area, although not directly related to management of bulk petroleum, this impact should be assessed in the study."

g. The preliminary views and rationale of CINCPAC were quoted in paragraph 8b of this appendix.

h. The Department of the Army made an informal reply to the JCS request. The reply indicated that the Army preferred to continue status quo at that time, but that final judgment would be withheld until the results of the completed study was made available.

i. Department of the Navy Memorandum, Op 403, Ser 585P403, Management of Petroleum, 15 July 1968 responded:

"Ref: (a) JCS 281335Z Jun 68

"1. In considering the four options presented in reference (a), option 2, continuing the status quo, plus necessary internal changes in the Inventory Control Points (ICP) to insure standardization of ICP responsibility functions and procedures would provide the most responsive program for the management of petroleum. This reasoning is based on the following:

"a. It is believed that a Service ICP can be more responsive if it is under the direct chain of command of the Service concerned, rather than under the command of the Defense Supply Agency (DSA) or another Service. The Service ICP is a depository for Service peculiar problems. With individual service ICPs, Service needs are highlighted, and Service problems anticipated. A current example is the Navy distillate fuel program now undergoing evaluation and detailed planning which requires close coordination between the inventory manager and various echelons of Navy command.

"b. The functions of inventory control, stock fund financing, facility management, developing and defending MILCON programs to meet Service requirements, quality surveillance, mobilization planning, and procurement inspection must be performed regardless of whether the ICP is under single Service, single manager, or DSA control. These functions which differ for each Service can best be performed by separate ICPs under command control of individual Service chiefs. It is emphasized that the Navy's two principal bulk fuels are JP-5 and NSFO, the Army uses principally ground and aviation products; and the Air Force used JP-4 and AVGAS. These products have peculiar storage and quality surveillance requirements, and each service trains personnel, and designs facilities to meet these requirements. The Navy Fuel Supply Office works with type and fleet commanders to develop training programs to meet fleet personnel requirements in fuel handling. It also monitors the Navy's quality surveillance program. It provides technical guidance in handling the Navy's unique storage and fuel handling problems for aviation products on ships.

"c. Although conceivable administration overhead would be reduced if all three (3) ICPs were consolidated under DSA such has not been the case in previous

consolidations. This is cited in the Logistic Management Institute Study of 21 February 1963 entitled, 'Control of Bulk Petroleum.' Further the study concluded that the current system is efficient and effective and no change in management of bulk petroleum is essential.

"2. The implementation of the single manager concept whether under a single Service or DSA would disrupt the present efficient petroleum management system. The Service departments are charged with the responsibility for ensuring their own logistic support. To expand DSA's or another Service's responsibilities and functions to include this responsibility would have a serious impact on the efficient meeting of the Services' individual responsibilities. To assign the department responsibility for their own logistic support, yet remove the management capability to ensure such support would be inconsistent with good management practice. Demonstrated responsiveness in time of crisis has marked the efforts of the present Defense Fuel Supply Center/Navy Fuel Supply Office team.

"3. Standardization should only be implemented where it is considered necessary for increased responsiveness, and not just for the sake of standardization. Care must be exercised in effecting multi-Service standardization. Since each Service has the responsibility for logistic support they should retain authority for receiving and handling pertinent petroleum logistic management information tailored to individual Service needs. This may require certain ICP organizational differences to provide the desired petroleum management."

j. The Marine Corps views were expressed in a classified message 191311 July 1968, Management of Petroleum, and is not quoted herein. The message indicated that since the Marine Corps petroleum management and support operations were so closely tied into the Navy support system, the Marine Corps views would have to be considered in conjunction with those of the Navy.

k. Chief of Staff Air Force message, AFSSS, Management of Petroleum, dated 151718 July 1968 responded:

"1. Reference your message JCS 3592, dated 281335Z Jun 68. (NOTAL)

"2. The following preliminary views and rationale of the options offered in your message are provided.

"a. Option (a): Continuing status quo. The Air Force does not favor this option as it would perpetrate the split operation which we now have with the Air Force Inventory Control Point (ICP) which experience has proven to be undesirable and inefficient.

"b. Option (b): Continuing status quo plus internal changes in the ICP of the military departments at Cameron Station to insure standardization of ICP responsibilities, functions, and procedures. This is the most desirable option of the group offered in reference message. The Air Force has already attempted to realign functions, responsibilities, and personnel assignments at the Cameron Station ICP Detachment so as to make it compatible with the functions in which Defense Fuel Supply Center and other service ICPs have a common interest. Approval of these actions has been held in abeyance by ASD (I&L) pending completion of the Sec Def directive study in this area.

"c. Option (c): Establish a single manager arrangement under one military department to assure management responsibilities and functions now assigned to the departments and DSA. The Air Force does not favor this option as petroleum problems are so intermittently associated with weapons and/or hardware

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and financial management within the services that it is essential that each military department retain those functions presently assigned and performed. For bulk petroleum, past studies have repeatedly concluded that management should remain within each service.

"d. Option (d): Expanding DSA's responsibilities and functions to assume petroleum management responsibilities and functions now assigned the military departments. - The Air Force does not favor this option for reasons similar to those cited for option c. The management policies of each service with their peculiar hardware, weapons, and missions would conceivably still require separate systems of management even though the overall control would be placed within one centralized activity."

APPENDIX E

FLOATING STORAGE

APPENDIX E

FLOATING STORAGE

1. DEFINITION. The term "floating storage" as used herein means full operational tankships of T-2 size or larger placed on station for extended periods of time to receive and dispense products to smaller vessels. The term also includes tankers which are unnecessarily delayed in discharging cargo. These means of receiving, storing, and distributing products are used in lieu of the alternative of constructing adequate conventional mooring facilities and shore tankage.

2. BACKGROUND

a. In the early stages of the buildup in Vietnam, both commercial and MSTs floating storage was initiated. In mid-1965, Asiatic Petroleum Corporation found it necessary to station a tanker at Nhabe to handle the increased military requirements which had been assigned to that company. Similarly, Esso International, Inc., in December 1965, positioned a tanker in Singapore Harbor for floating storage. At Singapore, Esso made numerous transfers to and from the floating storage tanker, as well as between delivering vessels. Both companies also experienced considerable delay to vessels delivering cargoes to points in Vietnam north of Nhabe where storage in the early stages of the buildup was negligible to inadequate. In effect, therefore, delivery vessels were also used as floating storage.

b. An MSTs T-2 tanker was assigned to Vietnam on 7 March 1965 solely for the purpose of serving as floating storage. As POL consumption grew, this vessel was supplemented by an additional MSTs vessel. Subsequently, two T-2 (or larger) MSTs tankers were kept in Vietnam waters; one at Cam Ranh Bay and one at Da Nang. In 1968, the T-2 at Da Nang was replaced by a T-5 tanker.

c. It was generally recognized that in an underdeveloped country such as Vietnam approximately 1 year would be required to construct conventional storage by MILCON after the decision to do so was made. Similarly, the in-country commercial suppliers, in mid-1965, estimated that they would require up to 1 year to build storage in Vietnam after making the decision to do so.¹

3. ADVANTAGES OF USING VESSELS AS FLOATING STORAGE

a. The principal advantages of using tankers as floating storage were that they:

- (1) Could be placed on the scene promptly.
- (2) Did not compete with scarce construction resources.
- (3) Could be moved from one area of need to another as wartime requirements dictated.
- (4) Could be removed from floating service and put back into normal use when hostilities ceased.

¹ Response received in regard to DFSC Request for Proposal 65-N-345, 17 May 1965.

b. In the early stages of similar situations in the future, fully operational tankers should continue to be used, or there should be strategically located inventories of less expensive, more efficient storage capability especially designed for immediate placement and use in emergencies.

4. DISADVANTAGES OF USING VESSELS AS FLOATING STORAGE

The principal disadvantages of using tankers as floating storage were that they:

- a. Were costly in comparison to conventional storage in terms of both investment and operating costs.
- b. Entailed a higher degree of risk than conventional storage due to the possibilities of damage during vessel-to-vessel transfer and of explosion or fire during pumping operations.
- c. Resulted in problems of accurately measuring quantities of fuel received or transferred.

5. COST OF FLOATING STORAGE TO SUPPORT VIETNAM

a. It was not possible for the Joint Logistics Review Board to determine precisely the exact costs of commercial floating storage used in support of Vietnam operations since vessels used to store product were sometimes used to transport it as well. The in-country contracts contained a variety of provisions to deal with unpredictable vessel usage including ones that covered combined use for transportation and storage. It was possible, however, to calculate the difference between the actual costs of floating storage and those which would have been incurred for transportation only using generally recognized tanker rates. This difference provided a reasonable approximation of the commercial floating storage costs.

b. The cost for commercial vessels was then combined with that for MSTs vessels used for floating storage to determine the total amount that could have been avoided had adequate conventional storage been available. (See Chapter IV of this monograph.)

c. As noted in Chapter IV of this monograph, storage facilities of adequate size could not have been completed in Vietnam prior to 1 July 1966. Thus, the 3-year period from 1 July 1966 through 30 June 1969 was used as the basis for the cost analysis. Adequate facilities as of 1 July 1966 are assumed for purposes of this analysis.

d. In this analysis, the costs of floating storage were categorized in three ways: at Saigon (Nhabe), north of Saigon, and at Singapore. These groupings were used to highlight the high costs due to lack of storage and facilities north of Saigon and at Singapore as compared to Saigon (Nhabe) where facilities were more nearly adequate.

e. The following tabulations show the costs of each of the three contractors for commercial floating storage in the 1 July 1966 to 30 June 1969 time frame. Detailed cost breakdowns from which these summarized costs have been drawn were developed from the DFSC contracts by the DFSC Southeast Asia buyer.

(1) For Asiatic Petroleum:

<u>Location</u>	<u>Cost</u>
At Nhabe	\$ 161,791
Locations north of Nhabe	3,860,286
Singapore-Demurrage	2,434,572
Total	\$6,456,649

(2) For Esso:

<u>Location</u>	<u>Cost</u>
At Nhabe	0
Locations north of Nhabe	\$3,114,760
Singapore: Floating Storage	1,006,289
Demurrage	<u>3,066,953</u>
Total	\$7,188,002

(3) No floating storage was furnished by Caltex.

f. The costs that have been classified as those chargeable to MSTS floating storage are shown in the following tabulation. Cost data used herein were provided by MSTS.

MSTS Floating Storage

<u>Fiscal Year</u>	<u>T-2 Tankers On-station</u>	<u>Demurrage*</u>	<u>Total</u>
1967	\$ 4,407,649	\$ 1,616,200	\$ 6,023,849
1968	4,207,315	1,616,200	5,823,515
1969	<u>4,087,005</u>	<u>1,712,120</u>	<u>5,799,125</u>
Total	\$12,701,969	\$ 4,944,520	\$17,646,489

*Note: Actual MSTS demurrage costs for FY 67 and the latter half of FY 69 were not readily available and were, therefore, extrapolated from the actual costs for FY 68 and FY 69 (first half). The errors introduced by this procedure are not considered significant.

g. The total direct costs for floating storage used in support of the Vietnam operation can now be calculated for the 3-year period (FY 67 through FY 69). They are as follows:

<u>Location</u>	<u>Esso</u>	<u>Asiatic</u>	<u>MSTS</u>	<u>Total</u>
Nhabe	\$	\$ 161,791	\$	\$ 161,791
North of Nhabe	3,114,760	3,860,286	17,646,489	24,621,535
Singapore	<u>4,073,242</u>	<u>2,434,572</u>		<u>6,507,814</u>
Total	\$7,188,002	\$6,456,649	\$17,646,489	\$31,291,140

h. The total direct cost of floating storage in support of Vietnam operations is thus \$31,291,140, of which \$13,644,651 is commercial and \$17,646,489 is for MSTS.

i. It is evident from the cost summary above that virtually all of the direct costs of floating storage were incurred for areas north of Nha Be and at Singapore. Almost none of the costs are attributable to operations at Nha Be, although it might be contended that one of the MSTS T-2s which was kept on-station provided backup for the Nha Be terminal which was vulnerable to attack. Nevertheless, virtually none of the floating storage was actually used in support of Nha Be.

j. It should be emphasized that the preceding analysis represents a very conservative view of floating storage costs.

APPENDIX F
AVOIDABLE COST INCURRED BECAUSE OF
INADEQUATE FACILITIES

APPENDIX F

AVOIDABLE COST INCURRED BECAUSE OF INADEQUATE FACILITIES

1. BASIS OF COST ANALYSIS. The purpose of the cost analysis presented below is to illustrate the savings that could have been achieved had sufficient Government-controlled facilities been available in Vietnam during the 3-year period from 1 July 1966 to 30 June 1969.

2. DETAIL OF ESTIMATED COSTS WITH ADEQUATE FACILITIES

a. For purposes of comparison, the total costs with adequate facilities in Vietnam were computed for both the one- and two-port discharge cases. This computation was done to provide two points of reference.

b. The following cost development is based on the assumptions listed below:

- (1) Adequate facilities could have been available in Vietnam by 1 July 1966.
- (2) Receipts of full multi-product or single-product cargoes in T-2 size or larger vessels could be made at each of the main ports: Nhabe, Vung Tau, Cam Ranh Bay, Nha Trang, Qui Nhon, Tuy Hoa, Chu Lai, and Da Nang.
- (3) Two-port discharges could be made with the same vessels at any of the main ports listed above.
- (4) The freight rate for delivery to Cam Ranh Bay, which was centrally located, was used for estimating cost of single-port discharges.
- (5) The freight rates for Cam Ranh Bay and Da Nang discharge were used for estimating the cost of two-port discharges for all points in Vietnam.
- (6) Average U. S.-flag and foreign-flag rates were used for the respective quantities transported by MSTs and the contractors.
- (7) The following additional facilities would have been required to provide prompt discharge of tankers.

		<u>Capacity (in barrels)</u>	
	<u>Port</u>	<u>One-Port Discharge Capacity</u>	<u>Two-Port Discharge Capacity</u>
(a)	Nhabe (Saigon)	1, 000, 000	1, 000, 000
(b)	Vung Tau	200, 000	100, 000
(c)	Cam Ranh Bay	200, 000	100, 000
(d)	Nha Trang	100, 000	50, 000
(e)	Qui Nhon	200, 000	100, 000
(f)	Chu Lai	200, 000	100, 000
(g)	Da Nang	100, 000	50, 000
	Total	2, 000, 000	1, 500, 000

c. Cost Summary. The various costs associated with providing and operating adequate facilities in Vietnam were summarized in Table F-1 in order to facilitate and simplify their presentation. Each of the cost topics is also discussed briefly in the following paragraphs.

TABLE F-1
SUMMARY OF ESTIMATED COSTS FOR
ADEQUATE VIETNAM FACILITIES

<u>Cost Element</u>	<u>Barrels</u>	<u>Cost</u>	
		<u>One Port</u>	<u>Two Ports</u>
Construction of Additional Facilities	1,500,000*	\$ 16,560,000	\$ 12,420,000
Operating Costs at Additional Facilities	43,580,000	4,358,000	4,358,000
MSTS Ocean Transport Costs			
From Arabian Gulf	35,053,000	43,288,000	47,086,000
From Caribbean	7,633,000	23,947,000	24,355,000
Commercial Ocean Transport Costs			
From Arabian Gulf	61,215,000	37,590,000	38,878,000
From Caribbean	15,943,000	19,904,000	20,628,000
Total Cost FY 67-FY69		\$145,647,000	\$147,725,000

*2,000,000 barrels for one port.

d. Construction of Facilities

(1) The construction costs shown in Table F-1 were calculated at the average construction cost for military POL storage in the Republic of Vietnam per barrel.¹

(2) Construction of 1,000,000 barrels of storage in the Saigon (Nha Be) area might have created some excess capacity; however, the commercial facilities there were vulnerable to attack. Furthermore, their use was relatively costly to the Government. Thus, for purposes of this analysis, military construction and operation of facilities have been assumed. The principal alternative to military construction and operation would have been to contract with in-country suppliers for these facilities under a service contract similar to the Asiatic Petroleum-China Beach Contract. An advantage of such a Service contract would have been that the Government would recover its costs to the extent that the contractor used the facilities in the

¹Military Construction Status Report, South Vietnam, RCS: DD I&L 915, 30 September 1969.

10 years after completion. Other alternatives might also have been employed. Any one of these procedures would have been more favorable than that which was actually used and the total costs would have been in the same order of magnitude. In any event, military construction was selected for analysis in keeping with the conservative philosophy described earlier.

e. Operating Costs of Additional Facilities

(1) Military petroleum organizations operated the facilities at Vung Tau, Cam Ranh Bay, Nha Trang, Qui Nhon, Chu Lai and Da Nang. Hence, Nhabe would have been the only facility in Vietnam which would have involved additional operating costs. Asiatic Petroleum operated the contractor-owned, Government-controlled facilities at Da Nang under a Service contract for a fee substantially less than that charged at Nhabe (where the in-country suppliers controlled the facilities and would not allow MSTs to make deliveries).

(2) The throughput charge under the China Beach Service Contract (DSA 600-67-D-0591) was \$.10 per barrel. This charge was used to compute the operating cost for the 43,580,562 barrels at Nhabe (the quantity actually thruput at Nhabe in the 3-year period).

f. MSTS Ocean Transport Costs

(1) Ocean transportation costs for delivery to ports with adequate facilities for the 3-year period were calculated for both one- and two-port discharges. The rates used to calculate these costs were weighted by year, and the average per barrel was as follows:

	<u>One Port</u>	<u>Two Port</u>
(a) From Arabian Gulf	\$1.235	\$1.340
(b) From Caribbean	3.140	3.190

(2) The two-port rates above are higher than the \$1.32 and \$2.77 per barrel figures used in the actual cost development in Table F-2. This again emphasizes the conservative approach taken in this analysis.

g. Commercial-Foreign Flag Transportation Costs. The ocean transportation costs for the quantities transported by the in-country suppliers were calculated by using foreign-flag rates. "Weighted" average rates were also employed. These rates were similar to the basic rates included in the contract prices. The average per barrel rates that were used to calculate the cost of foreign-flag deliveries were as follows:

	<u>One Port</u>	<u>Two Port</u>
(1) From Arabian Gulf	\$.61	\$.64
(2) From Caribbean	1.24	1.29

3. SUMMARY OF COST ANALYSIS 1966-1969:

a. The actual cost for delivery was the sum of pertinent contract costs summarized in Table F-3 and the sum of other pertinent costs for delivery by MSTs summarized in Table F-2. These were:

(1) Contract delivery costs (Table F-3)	\$119,449,935
(2) MSTs delivery costs	<u>106,428,910</u>
(3) Total cost incurred	\$225,878,845

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TABLE F-2
MSTS DELIVERY COSTS
(FY 66 - FY 69)

<u>Cost Category</u>	<u>Cost</u>
MSTS Floating Storage in Vietnam (see Appendix E)	\$ 17,646,489
Cost of Transshipping:	
Arabian Gulf to Japan Total (7,533,000 bbls)	\$13,808,000
Caribbean to Japan Total (7,411,000 bbls)	\$19,789,000
Japan - RVN Shuttle (Total 14,944,000 bbls)	<u>16,250,000</u> 49,847,000
Terminal Thruput Costs in Japan	
14,944,000 bbls at \$.0852 per bbl average	1,273,229
Loss due to transshipping through Japan	
In-transit loss	\$ 406,050
Terminal handling loss	<u>363,142</u>
Total	769,192
Costs of Direct Shipments to RVN	
Arabian Gulf —	
27,520,000 bbls at \$1.32/bbl	\$36,276,000
Caribbean —	
222,000 bbls at \$2.77/bbl	<u>617,000</u>
Total	<u>36,893,000</u>
Total MSTS Delivery Costs	\$106,428,910

TABLE F-3
COSTS OF DELIVERY BY CONTRACTORS
(FY 66 - FY 69)

<u>Cost Category</u>	<u>Cost</u>
Freight: refinery to Singapore	\$ 48,052,776
Singapore transshipping	12,684,358
Floating storage at Singapore	1,006,289
In-transit loss at Singapore	1,957,688
Freight: Singapore to Saigon (Nhabe)	10,971,447
Demurrage in Vietnam	3,280,595
In-country charge at Saigon (Nhabe)	27,543,054
Freight: north of Saigon	10,132,743
In-country charge north of Saigon	2,787,826
Coastal Vessels in Vietnam	<u>1,033,159</u>
Total	\$119,449,935*

* Except for floating storage costs at Singapore specifically identified, floating storage costs have been included in the freight and demurrage charges listed above.

b. The total comparable cost that would have been incurred with adequate facilities is shown in Table F-1. It amounted to \$145,647,000.

c. Potential Savings. The potential savings are thus the difference between the actual costs of \$225,878,845 (shown above) and the one or two port discharge figures of \$145.6 and 147.8 million respectively.

(1) Actual Costs	\$225,878,845	\$225,878,845
(2) Est. Costs with Adequate Facilities for Discharge at: One Port	145,647,000	
Two Ports		147,725,000
(3) Potential Savings	<u>\$ 80,231,845</u>	<u>\$ 78,153,845</u>

4. IMPLICATIONS OF SAVINGS

a. The preceding analysis shows that from \$78.2 to 80.2 million dollars could have been saved if adequate military facilities for the off-loading of ocean tankers and product storage had been available from 1 July 1966 through 30 June 1969.

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b. The estimated savings figures do not include all potential savings, e. g., a portion of the \$27.5 million worth of collapsible storage installed after 1 July 1966 due to lack of adequate storage.

c. In the analysis, cost of construction of additional facilities have been amortized over a 3-year period. Their use beyond 3 years would increase the savings.

APPENDIX G
MACV DIRECTIVE 701-5

APPENDIX G

MACV DIRECTIVE 701-5

*MACV Dir 701-5

HEADQUARTERS
UNITED STATES MILITARY ASSISTANCE COMMAND, VIETNAM
APO San Francisco 96222

DIRECTIVE
NUMBER 701-5

15 September 1969
(MACJ4)

LOGISTICS PLANS

US FORCES PETROLEUM OPERATIONS

1. PURPOSE. This directive prescribes general policies, operating procedures, and responsibilities for US Forces engaged in petroleum operation in the Republic of Vietnam (RVN).
2. APPLICABILITY. This directive is applicable to all US Forces in the RVN. It does not apply to RVNAF or FWMAF except as it relates to the supply and distribution of petroleum products to them from US Military sources and civilian companies supplying petroleum products under a DSA contract.
3. GENERAL.
 - a. Background. The supply of bulk petroleum to US Forces, Republic of Vietnam Armed Forces (RVNAF), and Free World Military Assistance Forces (FWMAF) is accomplished through the MACV Assistant Chief of Staff for Logistics, J-4, Sub-Area Petroleum Office, Vietnam (SAPOV) through slating action. These requirements are fulfilled by MSTTS tanker deliveries and through DSA contracts with Esso, Shell, and Caltex oil companies delivering government-owned fuel to the RVN. Packaged POL is supplied to these forces through MILSTRIP and through DSA contracts with Esso, Shell, and Caltex. Commercial facilities are also utilized by the military in accordance with DSA contracts; however, under emergency conditions additional use may be made in accordance with MACV Directive 700-4.
 - b. The policies and procedures established herein supplement service directives pertaining to petroleum supply. Conflicts between this directive and service instructions should be reported to this headquarters for resolution.
 - c. Definitions.
 - (1) Sub-Area Petroleum Office, Vietnam (SAPOV). A staff element of the ACoS for Logistics, J-4, MACV.
 - (2) Bulk Petroleum Products. Petroleum products normally transported by pipeline, rail tank car, tank truck, tank trailer, barge, or ocean tanker and stored in tanks or containers having a fill capacity greater than 55 gallons.

*This directive supersedes MACV Directive 701-5, 13 July 1968.

(3) **Packaged Fuels.** Fuels normally supplied in bulk, but because of operational necessity are packaged and supplied in 55 gallon or smaller containers.

(4) **Commercial Packaged Petroleum Products.** Oils, greases, and specialty products normally supplied in containers up to 55 gallons in size supplied by in-country commercial sources under contracts executed by DSA.

(5) **MILSTRIP Packaged Petroleum Products.** Same definition as paragraph 3c(4), above, except supplied through MILSTRIP procedures.

(6) **Ordering Officer.** Person authorized to obligate funds in ordering portions of contracted quantities for any part of the contract period specified in DSA contracts. CINCPACAF (DMSP) is the ordering officer for US Air Force owned fuels ordered against contracts supporting the RVN. The CO, US Army Petroleum Center is the ordering officer for US Army owned fuels.

(7) **Call Forward Officer (CFO).** Person authorized to request deliveries from the contractor for products ordered by the ordering officer.

(8) **Message Slate.** A monthly AUTODIN report of planned bulk and packaged fuel delivery requirements for the five months following the "as of" date of the report.

4. RESPONSIBILITIES

a. The ACofS, J-4, MACV, is responsible for:

(1) Maintaining a Sub-Area Petroleum Office to discharge MACV staff petroleum logistics responsibilities.

(2) Coordinating joint petroleum logistics planning and policy matters.

(3) Coordinating the allocation of petroleum resources and directing operations of commercial facilities under emergency conditions as specified in MACV Directive 700-4.

(4) Reviewing, validating, and consolidating all component service and RVNAF requirements for bulk and packaged fuels, and submitting these requirements to CINCPAC for necessary action.

(5) Determining delivery quantities and port discharge sequence for MSTs and commercial tanker delivery into RVN ocean terminals (less Nha Be).

(6) Coordinating and monitoring employment of commercial and US Forces coastal tankers.

(7) Assisting Defense Fuels Supply Center (DFSC) in monitoring the progress and performance of off-shore petroleum supply and service contracts as requested by CINCPAC or specified by the provisions of the contract.

(8) Coordinating the programming, acquisition, construction, and disposition of petroleum storage and distribution facilities.

b. MACV component commanders are responsible for:

(1) Developing requirements for bulk and packaged fuels.

(2) Developing and submitting to SAPOV requirements for commercially supplied packaged petroleum products.

(3) Insuring authorized amounts of packaged petroleum products supplied under MILSTRIP are on hand.

(4) Conducting a continuous review of plans and operations to insure petroleum support for all units supported by their respective commands.

(5) Establishing a quality surveillance program for all petroleum products in the custody of units under their commands.

(6) Programming for construction of facilities required to discharge petroleum supply responsibilities.

(7) Providing and operating common use petroleum storage and distribution systems at military installations where their forces are the dominant users of fuel unless directed otherwise by this headquarters.

(8) Maintaining adequate operating stocks of products and equipment for executing assigned petroleum support responsibilities.

(9) Providing petroleum support to non-Department of Defense agencies and US Government contractors as directed, except as prescribed in paragraph 5a(2)(e).

c. In addition to the responsibilities assigned in paragraph 4b, above, CG, USARV, is responsible for:

(1) Providing and operating distribution systems for the supply of bulk and packaged petroleum products to US, FWMAF, and RVNAF, as authorized by COMUSMACV, in the II, III, IV, and northern I CTZ.

(2) Developing and publishing procedures for requisitioning, handling, accounting, safeguarding, and distributing bulk and packaged petroleum products from USARV depots, terminals, and supply points.

(3) Providing necessary personnel at Qui Nhon, Nha Trang, Saigon, and Can Tho to coordinate, in their respective areas, deliveries of petroleum products by commercial suppliers to all forces supplied under DFSC contracts and act as a focal point in coordinating matters with the commercial oil company's local representatives.

(4) Accomplishing the US Government Petroleum Procurement Inspection function within the RVN to include, but not limited to, quality assurance for procurement acceptance inspection of commercial contractor operations and procedures in accordance with DFSC contract provisions and DSAM 4155.1/AR 715-27/AFM 74-3.

(5) Providing a Quality Assurance Representative (QAR) at Qui Nhon, Nha Trang, Saigon, Cam Ranh Bay, Phan Rang, Tuy Hoa, and Can Tho to perform, at those locations, such duties which are the responsibilities of the US Government petroleum procurement inspector.

(6) Providing petroleum laboratory facilities in the RVN (including I CTZ) to support the quality surveillance programs of all services. Included in this requirement is the acceptance inspection of all packaged petroleum products procured in the RVN.

(7) Appointing necessary CFO to request deliveries and monitor distribution of bulk and packaged fuels for forces in II, III, IV CTZ, and northern I CTZ.

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d. In addition to the responsibilities assigned in paragraph 4b, above, COMNAVFORV is responsible for:

- (1) Providing and operating distribution systems, in I CTZ for the supply of bulk and packaged petroleum products to US, FWMAF, and RVNAF, as authorized by COMUSMACV, except as prescribed in paragraph 4c(1), above.
- (2) Developing and publishing procedures for requisitioning, handling, accounting, safeguarding, and distributing bulk and packaged petroleum products from COMNAVSUPPACT depots and terminals.
- (3) Designating personnel at Da Nang to coordinate deliveries of petroleum products by commercial suppliers to all forces supplied under DFSC contracts and act as a focal point for coordinating matters with the commercial oil companies' local representatives.
- (4) Providing an alternate inspector at Da Nang and Chu Lai to perform, at those locations, such duties which are the responsibility of the US Government petroleum procurement inspector.
- (5) Appointing necessary CFO to request deliveries and monitor distribution of bulk and packaged fuels for forces in I CTZ.

5. SUPPLY AND DISTRIBUTION

a. Concept

- (1) Bulk petroleum products, packaged fuels, and liquified petroleum gas (LPG).

(a) The SAPOV will initiate action for supply of products based on requirements submitted by components and RVNAF. In addition to marine terminal bulk deliveries by MSTs, contracts awarded by DSA require a local contractor to deliver products to ocean terminals and selected inland locations within his delivery capabilities.

(b) Distribution of contracted products beyond contractor's capability will be accomplished by CG, USARV, and COMNAVFORV within their respective areas of logistic responsibility.

- (2) Packaged petroleum products (excluding packaged fuels and LPG).

(a) SAPOV will inform components which commercial packaged petroleum products are to be provided. SAPOV will initiate action for contractual supply of these products to I, III, and/or IV CTZ based on requirements submitted by component commanders and RVNAF. II CTZ will be supported through the MILSTRIP system.

(b) Commercial packaged petroleum products will be available in the Saigon, Delta, and Da Nang areas. Contractors will deliver as specified in the contract. Packaged products lifted from contractor terminals for delivery to areas not specified in the contract must be moved to the final destination by government provided transportation. Movements of these products to II CTZ must be approved and coordinated through CG, USARV.

(c) To insure timely, effective supply and to assist contractors in developing blending schedules, SAPOV will, in conjunction with the commercial suppliers, develop monthly supply and distribution plans based on quarterly requirements submitted by components and RVNAF.

(d) MILSTRIP packaged products will be supplied by CG, USARV, and COMNAVFORV through military supply channels.

(e) Contractors supporting US Government agencies requiring brand name packaged products, not available through the US military supply system, must obtain these items through their own resources.

b. Requirements

(1) General. DSA contracts for the supply of bulk petroleum products normally cover a six month period. Contracts for packaged products are normally awarded for a calendar year. To provide adequate lead time for negotiation and award of contracts, requirements must be submitted to SAPOV at least seven and one half months prior to the expiration of an existing contract if continued coverage is required. Fully justified requests for increased coverage or for new products to be added to existing contracts may be submitted at any time.

(2) Forecast of requirements.

(a) Component commanders and RVNAF advisory groups (for RVNAF requirements) will submit forecasts of bulk and commercial packaged petroleum products (RCS: CINCPAC 4020-16) required to support their forces, other US Government agencies, and US Government contractors receiving POL products from distribution points under their control. Therefore, requirement forecasts will indicate nomenclature, quantity required by location, and method of delivery desired. Military requirements for nonstandard brand name items must include reasons why standard military products are unacceptable.

(b) Forecasts of requirements will be submitted to SAPOV in accordance with the following schedule. Revisions will be submitted as directed.

1. Bulk petroleum products.

a. Due 15 November for 1 July through 31 December requirements.

b. Due 15 May for 1 January through 30 June requirements.

2. Packaged products received in accordance with contracts with local suppliers. Due 25 May for the subsequent calendar year's requirements.

3. LPG due 15 August for 1 April through 31 March requirements.

c. Request for delivery

(1) Bulk and packaged fuels.

(a) Support requirements for bulk and packaged fuels from local commercial sources for US and FWMAF will be submitted by the requesting unit to the command responsible for petroleum distribution. MACV Form 14-R, Request for Delivery of POL from Commercial Sources (Annex A) may be utilized for submitting requests. The area CFO will call forward deliveries in accordance with procedures established by CG, USARV, and COMNAVFORV.

(b) Support requirements for bulk and packaged fuels from local commercial sources for RVNAF will be submitted to SAPOV by 1 June for period 1 July through 31 December and by 1 December for period 1 January through 30 June. Special or supplemental requests may be submitted as required. SAPOV will place delivery orders, DD Form 1155, with the contractors.

(2) Packaged products provided by DSA contracts from in-country commercial suppliers.

(a) Requirements for contracted packaged products for US and FWMAF will be submitted by the requesting unit to the command responsible for petroleum distribution. These requirements will be consolidated in the Monthly Packaged POL Supply Plan and Stock Status Report, (see paragraph 8c, below).

(b) The SAPOV will prepare MACV Packaged POL Supply Plan, published quarterly with changes made monthly, to serve as a planning document for commercial contractors and CFO.

(c) CFO will place a monthly Call Forward Request with the contractors and instruct them to deliver required quantities. The MACV Packaged POL Supply Plan is to be used by the CFO as authority for placing demands on the contractors.

(d) Contractors are not authorized to deliver products exceeding the quantities shown on MACV Packaged POL Supply Plan without prior approval of SAPOV. SAPOV should be advised expeditiously when the residual balance on the MACV Supply Plan is insufficient to support requirements.

(e) Delivery orders (DD Form 1155) will be prepared by SAPOV for RVNAF requirements. The DD Form 1155 is a method of controlling quantities drawn by RVNAF from commercial contractors and covers a six month period.

d. Accounting Procedures

(1) Service directives, supplemented by component commands, will govern accounting procedures and accountability for petroleum products in the custody of component commands.

(2) Procedures proposed by the component commands which involve the supply of petroleum products from local suppliers under DSA contracts will be submitted to SAPOV for approval and coordination with the local contractor(s) prior to publication.

(3) Borrow and loan of products (US/RVNAF). Under certain conditions it may be necessary and/or desirable for US Forces to borrow petroleum products from the RVNAF for a temporary period or vice versa. The following procedures will apply:

(a) The lending organization will obtain the signature of a responsible individual assigned to the borrowing organization on a locally prepared certificate (see Annex B), containing the date, organization, printed or typed name, and legible signature of borrower. One copy of the signed certificate will be given to the borrowing organization and one will be retained by the lending organization.

(b) The borrowing unit is responsible for effecting repayment in kind at the same location where the product was received or by other mutually acceptable methods. Repayment will be made as expeditiously as practicable.

(c) Upon repayment, the borrowing organization will obtain a certificate from a responsible individual of the lending organization showing the quantity repaid. The certificate will clearly indicate that the quantity transferred is for repayment of a loan (see Annex B).

(4) Documentation of receipts, shipments, and transfers from tanker/barge.

(a) Applicable Army, Navy, and Air Force regulations prescribe the use of DD Form 250-1, Tanker/Barge Loading/Discharge Report. These forms will be used in connection with all tanker and barge loadings and discharges which involve MSTs and commercial tankers/barges.

(b) Required distribution of completed DD Form 250-1 is set forth at Annex C.

(5) Reporting of Air Force owned petroleum products in Army or Navy petroleum terminals, including floating storage.

(a) Air Force Regulation 67-50, Report of Air Force Owned Aviation Fuel and Oil, requires inventory and other data be reported for Air Force owned products held in terminal storage for redistribution. US Army and US Navy operated bulk petroleum terminals in the RVN will report this information. Detailed instructions for preparing and submitting this report are contained at Annex D (RCS: MACJ4-106).

(b) Individual reports will be made for each outlying storage location when more than one location is under the jurisdiction of a central or controlling activity.

(6) Documentation of receipts from commercial delivery trucks.

(a) Component commanders responsible for logistical support of I, II, III, and IV CTZ will insure that amounts invoiced by contractors on DD Form 250 are validated by installation/agencies receiving fuel. Consignee copies of delivery tickets will be matched against contractor's copies and attached to DD Form 250 as supporting documents prior to certifying for receipt on DD Form 250 by responsible officials. Validation may be accomplished at CFO, depot, property administrator, or government inspector level.

(b) To deter and detect forged receipts on delivery tickets, responsible component commanders will use imprinted codes, special stamps, or any other method deemed adequate to counter forging attempts.

(7) Reporting discrepancies in commercial tank truck deliveries.

(a) At locations where receiving meters have been installed, variances in excess of 3.12% (100 gallons per 3200 gallon tank truck load) between invoiced amount and metered amount will be completely documented and forwarded to SAPOV for review and forwarding to DFSC for possible claim action. Documentation should include date, truck number, name of driver, contractor's name, grade of product, delivery location, date of last meter calibration and any other pertinent circumstances.

(b) The variance will be annotated on the face of all copies of the delivery ticket.

(c) The discrepancy will be reported immediately to call forward officer, and contractor's dispatch office.

(d) Receiving locations not equipped with meters, and locations with inoperative meters, where obvious variances can be determined by means other than receiving meters will annotate the circumstances on the face of the delivery ticket. The reverse side of the delivery ticket will not be annotated unless an initial remark has been made on the face of the delivery ticket.

(e) All trucks will be thoroughly inspected in accordance with component directives prior to acceptance and discharge of product and upon completion of discharge.

e. Return of empty 55 gallon drums

(1) DSA contracts provide for the return of empty 18 gauge 55 gallon drums to the contractor for credit to the US Government. Emphasis is placed upon returning the maximum number of serviceable and repairable drums to the contractor to allow reimbursement to the US Government and make the drums available for refilling. The contractor will pick up empty drums at the full drum delivery point.

(2) Component commanders will develop and publish procedures to insure maximum practicable return and control of serviceable and repairable empty drums. Empty drums will not be returned to commercial suppliers without a company furnished document or receipt to acknowledge the turn-in. Where applicable, this receipt should be stamped on the face of the full drum delivery document. The receipt must include the printed name of the contractor's representative, his signature, ID card number, vehicle number, and date. One copy of receipt will be retained by the unit, and one copy will be forwarded to Property Administrator. In addition, the empty drum receipt must be annotated by the military and contractor representative to reflect whether drums returned are serviceable, repairable, or non-repairable. These classifications are essential to insure proper credits are obtained and to prevent diversion. All empty drums not eligible for return to contractors will be processed in accordance with existing directives.

6. INSPECTION.

a. Petroleum Procurement Inspection and Quality Assurance

(1) General. On 1 January 1969 the US Army assumed petroleum procurement inspection responsibilities in the RVN. This function is performed by petroleum QAR assigned to CG, USARV, elements. The petroleum QAR discharges duties outlined in DSAM 4155.1/AR 715-27/AFM 74-3 and the provisions of DSA contracts.

(2) The petroleum QAR duties generally fall into two categories.

(a) Those associated with performing quality assurance and procurement acceptance inspections for products and services accepted for the US Government in the RVN.

(b) Those associated with US Government inspection of contractors facilities pursuant to provisions of DSA contracts.

(3) Commanders responsible for furnishing alternate QAR will provide the petroleum QAR with copies of orders appointing alternate QAR for the ports of Qui Nhon, Nha Trang, Saigon, Cam Ranh Bay, Can Tho, Da Nang, and Chu Lai.

(4) The petroleum QAR will furnish alternate inspectors with definitive instructions regarding their duties.

(5) The petroleum QAR will conduct periodic on-the-job training inspections of procedures for individuals designated as alternate QAF.

(6) Commanders of organizations receiving deliveries of petroleum products from commercial suppliers will provide necessary administrative support to permit inspectors to carry out their duties. Possible support required will include vehicular transportation, transportation by small boat to vessels, billeting, and messing.

7. QUALITY SURVEILLANCE.

a. General. Petroleum products are received in a variety of ways, from large bulk quantities to small individual containers. When bulk products are transferred from one vessel or storage tank to another or repackaged, the probability of contamination exists. Contamination and deterioration can also occur during storage and distribution. The military services have published detailed instructions, designed to meet the quality surveillance requirements for each service, on care and handling of petroleum products. Certain common standards and procedures, to all services, have been established and are contained in MIL-HDBK-200C, 4 December 1968, Quality Surveillance Handbook for Fuels and Lubricants. Component commanders will insure that, as a minimum, these procedures are adhered to by petroleum supply activities under their control.

b. Frequency of sampling and testing bulk and packaged petroleum products will be in accordance with Tables II and III, Chapter 4, MIL-HDBK-200C.

c. Packaged fuels and lubricants received from CONUS or other PACOM areas without accompanying laboratory reports will be sampled and tested on arrival to insure that the product is usable.

d. Commanders will insure that quality surveillance procedures are developed and maintained by petroleum supply activities at air bases, depots, terminals, and supply points.

e. Inspecting and cleaning of bulk storage tanks will be accomplished in accordance with applicable service directives.

8. REPORTS.

a. Monthly Bulk Fuel Report (RCS: CINCPAC 4020-9) will be prepared as of 0800 hours on the 25th day of each month and submitted to SAPOV not later than the 6th day of the month following the as of date in accordance with the sample format at Annex E. Quantities will be reported in thousands of barrels (MBBL), to the nearest 100 barrels in the following sequence: Avgas, JP-4, Mogas, and Diesel. This report will be classified CONFIDENTIAL.

(1) PART I. Military bulk storage capacities (report usable storage capacity, 96% of rated capacity). Report total capacity by location and product of 500 barrels or greater, to include manifolded tanks of 500 BBL capacity or greater, regardless of service condition, under the operational control of the reporting command and/or agency. Capacities of rubber bags or bladders will not be reported. Any change in total tankage or product allocation at any location will be footnoted with a brief explanation of change (e.g., tank #3, 10 MBBL JP-4 destroyed Qui Nhon, 3 Jan 69, Tank #5 10 MBBL JP-4 converted to Avgas at Nha Trang). Tanks temporarily out of service will continue to be reported and footnoted by tank number and date of estimated return to service.

(2) PART II. Bulk fuels inventory. Report the total military bulk fuel inventory stored in facilities reported in PART I by product and location excluding rubber bags or bladders. In addition, report inventories of in-port MSTs and commercial resupply vessels and MSTs coastal resupply vessels under OPCON of the reporting agency. Report vessels by name, location, and product inventory. Vessels in the process of discharging as of the time of report will be reported as cargo on board prior to discharge and inventory of shore tanks will be reported per gauges prior to receipt.

(3) PART III. Bulk fuel consumption. For the purpose of this report, consumption is defined as the quantity of product issued at or by a bulk petroleum distribution point. To preclude duplicate reporting, transfers of product to a distribution point from a terminal or another distribution point do not constitute an issue of POL. Guidelines are furnished in subparagraphs, (a) through (f), below.

(a) CG, USARV, will report issues made to US Forces, FWMAF, and US Government contractors at and by USA bulk petroleum distribution points and contractor facilities in II, III, and IV CTZ by product, location, and consumer.

(b) COMNAVFORV, will report all issues made to US Forces, FWMAF, US Government contractors at and by bulk petroleum distribution points operated by COMNAVFORV and CG, USARV, and contractor facilities in I CTZ, by product, location, and consumer.

(c) CDR, 7th Air Force will report all issues made to US Forces, RVNAF, FWMAF, and US Government contractors at and by air bases. CDR, 7th Air Force will also report "wet wing" or aerial bulk fuel deliveries. In addition, contracted into-plane issues at Tan Son Nhut airfield will be reported separately by product and consumer.

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at or by ALC. (d) The ACofS, J-4, MACV, QM Advisory Division, will report issues made

(e) Naval Advisory Group will report issues made at or by VNN facilities.

(f) Air Force Advisory Group will report issues made at or by VNAF facilities.

(g) Fuel issued out of the following locations will be reported by the commands and for consumers indicated. Multiple listings for any one location indicates more than one distribution facility.

<u>ISSUING LOCATION</u>	<u>REPORTING COMMAND/ AGENCY</u>	<u>CONSUMERS REPORTED</u>
NSAD Chu Lai (Including Duc Pho)	NAVFORV	ALL
Da Nang AB	7AF	All except VNAF
Da Nang AB	AFAG	VNAF only
NSA Da Nang	NAVFORV	ALL
Dong Ha (Including Cua Viet & Quang Tri)	NAVFORV	ALL
Tan My (Including Phu Bai & Than My Thuy)	NAVFORV	ALL
An Khe	USARV	ALL
Cam Ranh Bay AB	7AF	ALL
Cam Ranh Bay (Including Ban Me Thuot, Phan Thiet, Dalat)	USARV	ALL
Nha Trang AB	7AF	ALL
Nha Trang	USARV	ALL
Phan Rang AB	7AF	ALL
Phan Rang LSA	USARV	ALL
Phu Cat AB	7AF	ALL
Pleiku	7AF	USAF only
Pleiku	USARV	USA/VNAF
Qui Nhon	USARV	ALL
Tuy Hoa AB	7AF	ALL
Tuy Hoa (Phu Hiep)	USARV	ALL

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<u>ISSUING LOCATION</u>	<u>REPORTING COMMAND/ AGENCY</u>	<u>CONSUMERS REPORTED</u>
Bien Hoa AB	7AF	ALL except VNAF
Bien Hoa AB	AFAG	VNAF
Cat Lo	NAVFORV	ALL
Saigon	MACJ46	ARVN
Saigon	USNAG	VNN
Long Binh (Including Tay Ninh, Phu Loi, Bear Cat, Phuoc Vinh)	USARV	ALL
Nha Be	USARV	ALL
Tan Son Nhut (Commercial)	USARV	ALL except USAF
Tan Son Nhut (Class III yd)	USARV	ALL
Tan Son Nhut (Int3-plane)	7AF	ALL
Tan Son Nhut AB	7AF	All except VNAF
Tan Son Nhut AB	AFAG	VNAF
Vung Tau	USARV	All including Marine River Force
Binh Thuy AB	7AF	All except VNAF
Binh Thuy	AFAG	VNAF
Can Tho/Soc Trang/Binh Thuy (Commercial)	USARV	All except USAF/ VNAF at Binh Thuy and ARVN
My Tho/Sa Dec	USARV	ALL
Vinh Long	USARV	ALL

(4) PART IV. Estimated requirements. Report estimated consumption of fuels by product including LPG to be supplied from the locations listed in PART III for the five months following the as-of-date of the report. Footnote quantities required for initial tank fill and explain all increases or decreases in excess of 10%.

(5) PART V. Remark: Include a brief narrative of significant losses of POL products or changes in redistribution patterns. (Tank cleaning or repair expected during the following month.)

b. Weekly Terminal Operations Report (RCS: CINCPAC 4020-3). This weekly report provides operational data of present and projected bulk POL steel tankage terminal operations. Rubber bags or bladders should not be considered.

(1) The report will be prepared as of 0800 hours each Monday and will be submitted to SAPOV by PRIORITY message to arrive not later than 0700 hours the following day.

(2) Reports for Qui Nhon, Nha Trang, Tuy Hoa, and Cam Ranh Bay will be submitted by activities designated by CG, USARV.

(3) Reports from Da Nang and Chu Lai will be submitted by activities designated by COMNAVFORV.

(4) Reports for USAF controlled tankage at Cam Ranh Bay will be submitted by activities designated by CDR, 7th Air Force.

(5) The report will include the following information.

(a) Line A - Usable Storage. Report 96% of serviceable storage rated tank capacities by product.

(b) Line B - Inventory. Report quantity of fuel on hand in Line A storage by product. For tanks receiving product from tankers, report volume prior to start of receipt.

(c) Line C - Estimated Issues. Report by product the estimated average daily issues from the terminal for the ensuing 7 day period. Any appreciable change in estimated issues from quantities previously reported will be clarified under Line H.

(d) Line D - Cargoes Received. Report all fully discharged cargoes received since the last report. Cargoes will be identified by cargo number, ship name, date of arrival, date of departure, product, and quantity discharged. Quantities will be in thousands of barrels to the nearest hundred barrels (e.g., 17.2 MBBLs).

(e) Line E - Cargoes Awaiting Discharge (excluding floating storage and RVN MSTs coastal tankers). Report all cargoes awaiting discharge as of the date of the report. Snips in the process of discharging will report cargo on board prior to start of discharge. Identification of cargoes will be as required at Line D, to include estimated date of departure.

(f) Line F - Notes on Current Storage. Include pertinent information explaining changes in Line A from previous report. Further, report by product any changes in serviceable terminal tankage scheduled for the next 30 day period.

(g) Line G - Notes of Interest. Include information on conditions that may contribute to or adversely affect terminal capability. Sea load lines out of service will be reported with date of estimated return to service.

(h) Line H - Additional Storage. Report the inventory of floating storage/RVN MSTs coastal tanker cargoes by product.

c. Monthly Packaged POL Supply Plan and Stock Status Report (RCS: MACJ4-107 and MACJ42-27 (R-1)). This report will furnish management data necessary to evaluate stock status of commercial packaged petroleum products and serve as a planning document for delivery of those POL products.

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(1) Reporting agencies are: CG, USARV, for Saigon/Delta; COMNAVFORV, for I CTZ; Air Force Advisory Group for VNAF; Naval Advisory Group for VNN; and the ACoS, J-4, MACV, Quartermaster Advisory Division (MACJ46) for ARVN.

(2) Report will be prepared monthly as of the last day of the month. No format is prescribed. The report will include:

(a) The on-hand stock status and total issues during the reporting period for products provided by ideal supplier.

(b) The monthly requirement for each product, by container size and delivery location, for the 3 months following the as-of-date.

(3) Report will be submitted in duplicate to SAPOV, APO 96222, to arrive not later than the 10th day of the following month.

d. Daily Terminal Inventory Report (RCS: MACJ4-108). This report reflects marine terminal bulk fuel stock levels and permits timely adjustment of tanker cargoes prior to loading for RVN discharge (see Annex F).

(1) Usable inventories and other data in paragraph 8d(4), below, will be submitted to SAPOV by telephone not later than 1100 hours daily (including weekends). Quantities will be reported in thousands of barrels (MBBLS) to the nearest hundred barrels.

(2) Reports for Cam Ranh Bay, Nha Trang, Tuy Hoa, Phan Rang, Qui Nhon, and Vung Tau (in that sequence) will be made by USARV elements.

(3) Reports for Da Nang, Chu Lai, Duc Pho, Tan My, Dong Ha, Phu Bai, Cau Viet, and Quang Tri (in that sequence) will be made by NAVFORV elements.

(4) The report will be made in the format shown at Annex F.

(a) Identify each location by use of alphabet in Column 1, e. g., Location A (for Da Nang), Location B (for Chu Lai), etc.

(b) For each location report data as listed in Column 2 for each grade of fuel (columns 3 through 6).

(c) Column 2, Line A is military inventory in shore tankage.

(d) Column 2, Line B is commercial inventory in shore tankage allocated for military use.

(e) Column 2, Line C (for Da Nang only) is usable inventory stored aboard the floating storage tanker.

(f) Column 2, Line D. Report the days of supply for each grade fuel on hand.

(g) Column 2, Lines E through I. Report the usable inventory aboard in-port tankers awaiting discharge, including MSTs T-2 and T-1 coastal tankers under the OPCON of the reporting activity.

e. Petroleum Damage/Deficiency Report (short title: REPOL) (RCS: MACJ4-109).

(1) Purpose of this report is to advise this headquarters (SAPOV) of damage and/or deficiencies affecting petroleum supplies and bulk petroleum storage and distribution systems.

(2) Reporting agencies are:

(a) CDR, 7th AF. All USAF bases in the RVN having Air Force Bulk POL transportation capability.

(b) CG, USARV. All US Army operated pipelines, storage areas, tank farms, ports, and Army controlled bulk transport capability.

(c) COMNAVFORV. All US Navy operated pipelines, storage areas, tank farms, ports, and Navy controlled POL transport capability.

(d) The ACofS, J-4, MACV, QM Advisory Division (MACJ46). All ARVN storage and ARVN controlled bulk POL transport capability.

(e) Air Force Advisory Group. All VNAF storage and bulk POL transport capability.

(f) Navy Advisory Group. All VNN storage and bulk POL transport capability.

(3) Report will be submitted within 6 hours of damage or as required for POL deficiencies by priority message to COMUSMACV, ATTN: MACJ43-PO. This report will be classified as appropriate in accordance with content.

(4) Report will contain the following information:

(a) Part I. Facility/Transport Damage (if applicable).

1. Specific location of damage.

2. Steel storage tanks. List tank number and tank farm as well as product to which tank is allocated.

3. General description and significance of damage.

4. Estimate of residual usable storage and distribution facilities.

5. Estimate of remaining usable product (to include a general statement of effects on combat and supply operations planned for next 30 days).

6. Estimated date when repairs or replacement will be completed and when facilities will be operational.

(b) Part II. Critical Deficiencies (if applicable) (a situation where available assets and scheduled resupply will not support planned operations).

1. Statement of situation to include location(s); available assets; expected tanker arrivals; additional requirements and time period in which needed; and effect on combat operations if resupply is not effected.

2. Limitations on tanker operations (draft, discharge facilities, etc.).

f. Inventory of Steel POL Tanks in RVN will be prepared as of COB last day of each month and submitted to SAPOV to arrive not later than the 5th day of the following month (RCS: MACJ4-110) (see Annex G).

POL

- (1) Part I US owned tankage. Report:
 - (a) Tank number.
 - (b) Capacity in MBBL.
 - (c) Type of product.
 - (d) In or out of service.
 - (e) Reason out of service.
 - (f) ETR in service.
 - (g) Applicable remarks.
- (2) Part II RVNAF owned tankage. Report:
 - (a) Tank number.
 - (b) Capacity in MBBL.
 - (c) Type of product.
 - (d) In or out of service.
 - (e) Reason out of service.
 - (f) ETR in service.
 - (g) Applicable remarks.
- (3) Part III tankage planned next six months. Report:
 - (a) US/RVNAF ownership.
 - (b) Capacity in MBBL.
 - (c) Planned location.
 - (d) Planned product usage.
 - (e) Estimated BOD.
 - (f) Applicable remarks.
- (4) Part IV tankage under construction. Report:
 - (a) US/RVNAF ownership.
 - (b) Tank number.
 - (c) Capacity in MBBL.
 - (d) Tank location.
 - (e) Planned product usage.

POL

- (f) Percent of completion.
- (g) Estimated BOD.
- (h) Applicable remarks.

9. REFERENCES

- a. DSAM 4155.1/AR 715-27/AFM 74-3.
- b. AFR 67-50.
- c. MIL-HDBK-200C, 4 December 1968, Quality Surveillance Handbook for Fuels and Lubricants.
- d. MACV Directive 700-4.

FOR THE COMMANDER:



LOUIS J. PROST
Colonel, USA
Adjutant General

ELIAS C. TOWNSEND
Major General, USA
Chief of Staff

Annexes

- A. MACV Form 14-R
- B. Certificate
- C. Distribution Scheme for DD Form 250 Series Documents
- D. Instructions for the Preparation and Submission of AF Form 72
- E. Format for Monthly Bulk Fuel Report
- F. Format for Daily Terminal Inventory Report
- G. Format for Monthly Inventory of Steel POL Tanks

DISTRIBUTION:

I-A, II-B, III-B, IV-B, VI-B, VII-B

Plus:

300 - MACAG-AP	2 - COMSTSO
20 - NSAS	2 - 30th NCR (Naval Const Regt)
20 - USAHAC	9 - CINCPAC
20 - NAVSUPPACT, Da Nang	4 - USMACVTHAI
	1 - MACCO-RCO

REQUEST FOR DELIVERY OF PETROLEUM PRODUCTS BY COMMERCIAL CONTRACTOR						DATE
FROM: (Submitting Organization)		THRU:		TO:		
PERIOD						
REQUIRING ORGANIZATION		PRODUCT	UNIT OF ISSUE	QUANTITY	DESIRED DELIVERY MEANS	
LOCATION		ALTERNATE DELIVERY MEANS (IF APPLICABLE)				

MACV FORM 14-R
1 May 67
Previous editions are obsolete

POL

CERTIFICATE

This is to certify that fuel and lubricants were received by me from:
Chung nhan rang toi co nhan nhien lieu may bay va dau nhot tu dia diem:

UNIT _____
Don vi

LOCATION _____
Don tru

ON DATE _____
Vao ngay

AS FOLLOWS:
Ke sau day:

- a. Aviation Fuel (Grade) _____ (Gasoline) (Liters)
Xang may bay (Loai) (Lit Anh) Lit Tay
- b. Lubricants _____
Nhot
- c. Other (Ground Products) _____
Thu Khac (Nhien lieu dung cho duong bo)
- d. Aircraft Type _____
Loai may bay
- e. Aircraft Number _____
So san xuat may bay

NAME _____
Ten

GRADE _____ SN _____
Cap buc Quan so

ORGANIZATION _____
Co Quan

NOTE: This is a sample format to be prepared locally.

Annex B

DD FORMS 250-1 ARMY DISTRIBUTION CHART

Send Indicated Number of Copies to Activities Listed	Loading		Discharge	
	Tanker	Barge	Tanker	Barge
Each consignee:				
By mail (CONUS shipments only) -----	2	2	2	2
With shipment (Note A) -----	1	1		
Master of vessel (Note B) -----	1	1	1	1
Paying activity -----	2	2	2	2
Contractor -----	As required		As required	
Inspector's File (as applicable) -----	1	1	1	1
Government representative at each destination (as applicable) -----	2	2	1	1
Joint petroleum office (overseas shipment (Note C)) -----	12	0	0	0
Military Sea Transportation Service, (MSTS)				
Dept of the Navy, Wash. D. C. 20390 -----	2	0	2	0
Tanker's agent (Note D) -----	3	0	3	0
The US Army Petroleum Center,				
Cameron Station, Va., 22314 -----	2	2	2	2
Navy Fuel Supply Office, Cameron				
Station, Va., 22314 -----	1	1	1	1

NOTE A - On all oversea shipments provide for a minimum of four consignees. Place one copy in each of four envelopes and mark "Consignee First Destination, " "Consignee Second Destination, " etc.

NOTE B - When a vessel departs without the form it will be mailed to the vessel.

NOTE C - Mark copies of DD Form 250-1 "Consignee copies for Distribution" and air mail to each Joint Petroleum Office receiving a portion of cargo. On shipments to Japan and Korea, air mail one additional copy to the appropriate sub-area petroleum office and three additional copies to Quartermaster POL Division, US Army, Japan, APO San Francisco 96343. (See inclosure 3 for other addresses.)

NOTE D - Not required if non-MSTS vessel is used.

POL

DD FORMS 250-1 AIR FORCE DISTRIBUTION CHART

Distribute indicated Number of Copies to Activities Listed	Loading		Discharge	
	Tanker	Barge	Tanker	Barge
Mail (CONUS) Shipments only	3	3		
Each Consignee With Shipment (Note A for Shipping only)	1	1	4	4
MASTER OF VESSEL (Note B)	1	1	1	1
Paying Office (Note C)	2	2	2	2
AF Aerospace Fuels Field Office - Cognizant of Shipping Point - Obtain addresses from Address List of this Attachment	1	1	0	0
AF Aerospace Fuels Field Office - Cognizant of the CONUS Receiving Point - Obtain addresses from Address List of this Attachment	1	1	1	1
Joint Petroleum Officer - Overseas Shipment (via air mail) (Note D)	12	0	0	0
Det 29, SAAMA (SAOMR) Cameron Station Alexandria, Va. 22314 (Note F)	1	0	1	0
Det 29, SAAMA (SAOMAP) Cameron Station Alexandria, Va. 22314	2	2	2	2
Overseas Theater Accounting Office (Note E)	1	0	1	0
Army Pet Center (Note G) (if applicable)	1	1	1	1
Navy Fuel Supply Office (Note G) (if applicable)	1	1	1	1
Tanker/Barge Agent (If no agent give or mail to Military Sea Transportation Services representative (MSTS))	2	0 or 2 Note H	2	0 or 2 Note H
MSTS, Dept of Navy, Wash., D. C. 20390 (via air mail) (United States naval ship and all tankers and barges under charter to MSTS)	2	0	2	0
Government Representative at each Destination	2	2	1 Final Dischrg Point Only	
Cognizant inspector's File	1	1	1	1
Contractor	As required		As required	

F. O. B. Destination, Acceptance Destination - Mail copies of executed report to prime contractor	0	0	2	2
Responsible Transportation Officer - Attach to property received copy of G B/L or a copy of commercial B/L if to be commented to G B/L at destination	1	1	1	1

NOTES FOR AIR FORCE

NOTE A - Attach to ullage data. Provide for a minimum of four (4) consignees on all oversea shipments and place in envelopes. Mark envelopes "Consignee - First Destination," "Consignee - Second Destination." etc., as applicable.

NOTE B - When a vessel departs without the form, it will be mailed to the vessel.

NOTE C - Refer to contract for finance/documentation and supplement requirements for Government-owned product shipments. Distribution of DD Form 250-1 (receiving) to Paying Office not required unless payment for product or service is involved. Where inspection is at origin and acceptance is at destination, the Paying Officer copies, clearly identified as Finance Officer copies, will be forwarded to the receiving activity for completion. Copies will be forwarded by air mail where practical.

NOTE D - See Inclosure 3. On shipments to Japan and/or Korea, air mail one (1) copy of DD Form 250-1 (shipping) (with copy ullage data attached) to Sub-Area Petroleum Officer, US Forces, Japan APO San Francisco 96525. Also, air mail three (3) copies with one (1) copy ullage data to the Quartermaster POL Division, US Army Japan, APO San Francisco 96525.

NOTE E - Air mail to the applicable overseas theater accounting office as follows:

European (Incl Turkey) - 26 Cmbt Spt Gp (FAF8), APO New York 09012
Pacific - 6100 Spt Wg (KBCPT-FA), APO San Francisco 96323
Alaska - HQ AAC (ALDCA-AG), APO Seattle 98742

NOTE F - Attach one (1) copy of the ullage or innage data.

NOTE G - When one grade of product is loaded on the same vessel by more than one Military Service, each Military Service will receive a copy of the loading and discharge report of the other Military Service, i. e., the Army and/or Navy will receive a copy of the Air Force loading and discharge reports.

NOTE H - For commercial ocean going barges.

DD FORM 250-1 NAVY DISTRIBUTION CHART

Distribute Indicated Number of Copies To:	Loading		Discharge	
	Tanker	Barge	Tanker	Barge
By Mail (CONUS Shipments only)	3	3		
Consignee With Shipment (Note A)	1	1	4	4
Master of Vessel (Note B)	1	1	1	1
Contractor	As required		As required	
Inspector	1	1	1	1
Government Representative at Each Destination	2	2	Final point 1	Dischrg only 1
Joint Petroleum Office (Overseas Shipments (Note C) See Incl 3	12	0	0	0
Military Sea Transportation Service Washington, D.C. 20390	2	0	2	0
Tanker's Agent (Note D)	2	2	2	2
US Navy Fuel Supply office, Cameron Station, Alexandria, Va. 22314	2	2	2	2
Ordering Activity (Note E)	1	1	1	1
Naval Ship Systems Com: and Headquarters Washington, D.C. 20390 (Note F)	1	1	0	0
Naval Air Systems Command Headquarters Washington, D.C. 20390 (Note G)	1	1	1	1
Naval Finance Center, Property Accounting (FPA 110) Washington, D.C. 20390 (Note I)	2	0	2	0
Paying Office	2	2	2	2
Army Pet Center, Cameron Station, Alexandria, Va. 22314 (Note I)	1	0	1	0
AF Det 29, SAAMA (SAOMR) Cameron Station Alexandria, Va. 22314 (Note I)	1	0	1	0
AF Det 29, SAAMA (SAOMAP) Cameron Station Alexandria, Va. 22314 (Note I)	2	2	2	2
F. O. B. Destination - Acceptance Destination - mail copy of executed report to prime contractor	0	0	2	2
Responsible Transportation Officer - attach to Property Received copy of GB/L or a copy of commercial B/L if to be converted to GB/L at destination	1	1	1	1

NOTE A - On all oversea shipments, provide for a minimum of four (4) consignees. Place one (1) copy in each of four (4) envelopes and mark "Consignee-First Destination, " "Consignee-Second Destination, " etc.

NOTE B - When a vessel departs without the form, it will be mailed to the vessel.

NOTE C - Airmail to each Joint Petroleum Office receiving a portion of the cargo. On shipments to Japan and Korea, airmail one (1) additional copy to the appropriate Sub-Area Petroleum Office and three (3) additional copies to the Quartermaster POL Division, US Army, APO San Francisco 96343. On MAP shipments distribute only two (2) copies to the JPO.

NOTE D - For United States Naval Ship (USNS) contract-operated tankers and all chartered tankers, two (2) copies for the agent. For USNS Civil-Service-manned tankers, two copies to the Cognizant Commander Military Sea Transportation Service (COMSTS) Area Commander as published in the Weekly Report of Military Sea Transportation Service (MSTS) Ship Activity (MSTS Report 3120-15). For commercial oceangoing barges, mail one copy to owner/operator of the barge and one copy to the MSTS office which chartered the barge.

NOTE E - Distribute only when requisitioning or ordering activity is other than consignee or Defense Fuel Supply Center.

NOTE F - For all petroleum products except aircraft fuels and aircraft lubricants.

NOTE G - For aircraft fuels and aircraft lubricants only.

NOTE H - For all petroleum products delivered by tanker.

NOTE I - When one grade of product is loaded on the same vessel by more than one service, each service will receive a copy of the loading and discharge report of the other service, i.e., the Air Force and/or Army will receive a copy of Navy loading and discharge reports.

INSTRUCTIONS FOR THE PREPARATION AND SUBMISSION OF AF FORM 72

1. SECURITY CLASSIFICATION OF AF FORM 72. Reports prepared under this directive will normally be unclassified.
2. SUPPLY OF FORMS. AF Form 72 will be reproduced locally on 8x13 paper in accordance with the format illustrated at Appendix 1 to this annex.
3. WHEN TO PREPARE AF FORM 72. AF Form 72 will be prepared as of 0800 hours on the first day of each month.
4. HOW TO PREPARE AF FORM 72. The AF Form 72 is prepared in five (5) copies as of 0800 hours on the first day of each month covering the preceding month's activity. The stock report should be supported with receiving and shipping documents and/or documents necessary to substantiate statistics included thereon, e.g., report of survey, inventory adjustment vouchers, or letters of explanation of unusual occurrences.
 - a. Heading.
 - (1) Station. Enter name of station, location, and station code number as listed in ACN 3-201, Part Five, Volume I.
 - (2) Command. Enter PACAF.
 - (3) As of date. Enter 0800 and the first calendar day of the month.
 - (4) Reports Control Symbol. Enter HAF-S73.
 - b. Section I, Inventory Data:
 - (1) Column a, Grade. Enter the grade of aviation fuel being reported. (JP-4 and Avgas. Bulk and packaged quantities will be combined.)
 - (2) Column b, Beginning Inventory. Enter the total quantity in gallons reported in column f of the previous month's report.
 - (3) Column c, Receipts. Enter the total quantity, in net gallons, at 60 degrees F of the product received during the reporting period. ASTM-IP Tables will be used in converting gross quantities to net.
 - (4) Column d, Total Shipments. Enter the total quantity in gallons of product shipped (transferred out) during the reporting period. This quantity must equal the sum of columns b through k in Section II. Packaged fuels (55 gallon drum - 500 gallon bladders) for airlift will be considered a shipment when it is loaded aboard the aircraft. This shipment will be documented on a DD Form 1348-1, prepared and signed by the shipping activity. The file copy will be supported by the applicable TCMD. Consolidated DD Forms 1348-1 are acceptable.
 - (5) Column e, Ending Book Inventory. Enter the result, in gallons, by adding column b plus column c and subtracting column d.
 - (6) Column f, Ending Physical Inventory. Enter the total quantity, in net gallons, at 60 degrees F, of the product in bulk storage tanks, pipelines, and vessels or trucks, received in, but not discharged.

(7) Column g, Gain or Loss. Enter the difference between column e and column f. If column e is greater than column f, the quantity in column g will be shown as a loss by inclosing the figures in parentheses. If column f is greater than column e, the quantity in column g will be shown as a gain and not inclosed in parentheses.

(8) Column h, Rated Bulk Storage Capacity. Enter in gallons, the total rated bulk storage capacity assigned to jet fuel and to aviation gasoline. Rated capacities will be based on the calibration chart of each tank. Capacities will be reported for all tanks storing Air Force owned products (applicable to shore facilities).

(9) Column i, Capacity of Pipeline. Enter jurisdiction of the reporting activity. Pipelines between the two activities will be considered part of the shipping facility.

(10) Column j, In-Transit Gain or Loss. Subtract the quantity entered in column c from the total quantity indicated as shipped on the receiving documents (DD Form 250 series) and enter the remainder in parentheses in column j to indicate an in-transit loss. If the quantity in column c is larger than the quantities indicated as shipped on the receiving documents, enter the difference without parentheses in column j to indicate an intransit gain. If a shipping document is not available for the incoming tanker, no entry is necessary (applicable to shipment received from sources outside Vietnam). Combat losses must be reported as such. A negative combat loss report is required if applicable.

c. Section II, Shipments.

(1) Column a. Enter the grade of aviation fuel or oil being reported.

(2) Column b. Enter the total quantity, in gallons, of products shipped to Air Force activities during the period reported on. This entry will include all transfers to AF bases and Army or Navy terminals storing Air Force-owned products and all other nonreimbursable transfers of fuel.

(3) Columns c through k. The following entries, which constitute reimbursable sales, will be entered as separate items and reported by grade as total quantity, in gallons of product. This includes issues to Army Air Fields, supply points, and other using activities for which the Air Force will require reimbursements.

(a) Column c. US Navy.

(b) Column d. US Marine Corps.

(c) Column e. US Army.

(d) Column f. Other US Government Agencies.

(e) Column g. Commercial Airlines.

(f) Column h. Royal Canadian Air Force and Navy

(g) Column i. Foreign Governments.

(h) Column j. Military Assistance Program.

(i) Column k. The other reimbursables including issues to Esso or Shell Oil Companies.

5. AUDIT AND CONSOLIDATION OF AF FORM 72.

a. Reporting activities will audit reports of each terminal in their reporting jurisdiction and insure agreement of opening inventory with the preceding closing inventory. Consolidated reports will reflect balances for each terminal location, in addition to summary balances in detail. Mathematics of the report should be checked. In Section I, column b plus c minus d equals e. In Section II, the total of columns b through k must equal column d in Section I.

b. The addition or deletion of a reporting location for any grade of fuel for a reporting location will be explained on the face of the document.

c. Statement of explanation will be included for all changes in rated storage capacity, e.g., when tank is out of operation for cleaning or major repair.

d. When appropriate, include a brief explanation of excessive or other unusual entries. When pipeline breaks are encountered, a note should be included as to the estimated loss.

6. WHERE AND WHEN TO SUBMIT AF FORM 72.

a. One copy of the report should be forwarded by the most expeditious mail service to DET 29, HQ, SAAMA, ATTN: SAOMAB, Cameron Station, Alexandria, Virginia 22314. The AF Form 72 will be accomplished by:

(1) One copy of all receiving documents (Army and Navy terminals should submit only those documents pertinent to Air Force-owned aviation fuel).

(2) One copy of all documents covering shipments to Air Force activities or shipment (transfers) to other activities storing Air Force owned products.

(3) Original and two copies of documents prepared by the terminal to document shipments to other than Air Force activities. (Shipment for which the Air Force will require reimbursement.)

(4) One copy of reports of survey, inventory adjustment vouchers, and/or other documents which substantiate gains or losses reported on AF Form 72. (Army and Navy terminals should submit only those documents pertinent to Air Force-owned aviation fuel.)

b. One copy of the report without any supporting documentation should be forwarded by the most expeditious mail service to HQ, SAAMA, ATTN: SACSCF-1, Kelly AFB, Texas 78241, not later than the 7th calendar day of each month following the month being reported.

c. One copy of the stock report should be retained by the reporting activity. This copy should be supported with one copy of all substantiating documentation.

d. One copy of the stock report without any supporting documentation should be forwarded to HQ, MACV, ATTN: MACJ43-PO by the 7th calendar day of the month following the month being reported.

e. One copy of the stock report without any supporting documents should be forwarded to HQ, PACAF (DMSP), APO 96553.

USAF AVIATION FUEL AND OIL REPORT (Oversea AF POL Retail Distribution System)		OVERSEA OF POL RETAIL DISTRIBUTION STATION		COMMAND		AS OF DATE		REPORTS CONTROL SYMBOL	
SECTION I - INVENTORY DATA									
GRADE	BEGINNING INVENTORY	RECEIPTS	TOTAL SHIPMENT	ENDING BOOK INVENTORY b-c-d	ENDING PHYSICAL INVENTORY f	GAIN OR LOSS e-f	RATED BULK STORAGE h	CAPACITY OF PIPELINES i	IN-TRANSIT GAIN OR LOSS j
a	b	c	d	e	f	g	h	i	j

SECTION II - SHIPMENTS										
GRADE	AIR FORCE ACTIVITIES	U. S. NAVY	U. S. MARINE CORPS	U. S. ARMY	OTHER U. S. GOVERN- MENT AGENCIES	COMMER- CIAL AIRLINES	ROYAL CANADIAN AIR FORCE OR NAVY	FOREIGN GOVERN- MENT	MILITARY ASSIST- ANCE PROGRAM	OTHER REIMBURS- ABLES
a	b	c	d	e	f	g	h	i	j	k

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(EXAMPLE: NOT CLASSIFIED)

FORMAT FOR MONTHLY BULK FUEL REPORT (RCS: CINCPAC 4020-9)

PART I. Bulk Storage Capacities

(1) Military

<u>CTZ</u> <u>LOCATION</u>	<u>OWNER</u>	<u>115/145</u>	<u>JP-4</u>	<u>MOGAS</u>	<u>DIESEL</u>
Chu Lai	USA	15.0	25.0	10.0	17.5
Da Nang	USN	35.4	457.0	76.0	59.0

(Alphabetical by location and by CTZ.)

(2) Commercial

<u>LOCATION</u>	<u>OWNER</u>	<u>115/145</u>	<u>JP-4</u>	<u>MOGAS</u>	<u>DIESEL</u>
Da Nang	Shell	6.7	12.0	3.5	3.5
Da Nang (My Khe)	Shell	0	9.4	0	2.4

(Alphabetical by location.)

PART II. Bulk Fuel Inventory

(1) Military

<u>CTZ</u> <u>LOCATION</u>	<u>OWNER</u>	<u>115/145</u>	<u>JP-4</u>	<u>MOGAS</u>	<u>DIESEL</u>
Chu Lai	USA	12.6	22.3	5.2	11.1
Da Nang	USN	15.5	196.6	62.3	51.8

(Alphabetical by location and by CTZ.)

(2) Commercial

<u>LOCATION</u>	<u>OWNER</u>	<u>115/145</u>	<u>JP-4</u>	<u>MOGAS</u>	<u>DIESEL</u>
Da Nang	Shell	3.2	11.1	2.3	2.9
Da Nang (My Khe)	Shell	0	8.9	0	1.1

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Annex E

(EXAMPLE: NOT CLASSIFIED)

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PART III. Bulk Fuel Consumption

<u>CTZ</u> <u>LOCATION</u>	<u>CONSUMER</u>	<u>115/145</u>	<u>JP-4</u>	<u>MOGAS</u>	<u>DIESEL</u>
Chu Lai (1)	USA	1.6	36.2	14.0	17.1
Da Nang	USN	11.1	34.7	16.7	32.9

(Alphabetical by location and by CTZ.)

(1) Includes Duc Pho.

PART IV. Estimated Requirements

<u>CTZ</u> <u>LOCATION</u>	<u>115/145</u>	<u>JP-4</u>	<u>MOGAS</u>	<u>DIESEL</u>
Chu Lai				
Jan	10.0	240.0	25.0	35.0
Feb	12.0	230.0	25.0	37.0
Mar	12.0	225.0	25.0	37.0
Apr	12.0	225.0	25.0	37.0
May	12.0	225.0	25.0	37.0

(Alphabetical by location and by CTZ for the ensuing five (5) month period.)

PART V. Up-Date of Steel Tankage Construction

Provide construction status to include estimated completion date and reasons for delay. Do not enter "Same as last Report."

PART VI. Remarks

Pertinent remarks which cannot be entered elsewhere.

1. (U) Report of bulk POL Terminal Operations required by ref is submitted for period 3 March 1969. (All figures in MBL.)

2. (C) Da Nang:

	<u>115/145</u>	<u>JP-4</u>	<u>MOGAS</u>	<u>DIESEL</u>
A.	90.0	20.4	31.0	500.0
B.	75.6	15.2	10.0	351.3

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	<u>115/140</u>	<u>JP-4</u>	<u>MOGAS</u>	<u>DIESEL</u>
C.	30.0	6.3	20.0	15.1
D.	V-999, Hygromia, arrived 15 Feb, departed 17 Feb, 15.1 Avgas, 10.1 JP-4, 15.0 Mogas, 70.0 Diesel.			
E.	V-013, Koratia, arrived 27 Feb, 10.5 Avgas, 20.0 Mogas, 150.0 Diesel.			
F.	2 JP-4 tanks out of service for cleaning. Estimated return to service 15 Mar 69.			
G.	SEA Line out of service ETC 18 Mar 69.			
H.	Floating Storage - Saugatuck, 20.0 Avgas, 30.0 JP-4, 15.0 Mogas, 30.4 Diesel.			

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FORMAT FOR DAILY TERMINAL INVENTORY REPORT (RCS: MACJ4-108)

<u>COL 1</u> LOCATION CODE	<u>COL 2</u> CATEGORY	<u>COL 3</u> AVGAS	<u>COL 4</u> JP-4	<u>COL 5</u> MOGAS	<u>COL 6</u> DIESEL
A. Da Nang	A. On Hand (M)				
B. Chu Lai	B. On Hand (C)				
C. Duc Pho	C. Floating Storage				
D. Tan My	D. DOS				
E. Dong Ha	E. Cargo				
F. Phu Bai	F. Cargo				
G. Cua Viet	G. Cargo				
H. Quang Tri	H. Cargo				
I. Cam Ranh Bay	I. Cargo				
J. Nha Trang					
K. Tuy Hoa					
L. Phan Rang					
M. Qui Nhon					
N. Vung Tau					

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Annex F

FORMAT FOR MONTHLY INVENTORY OF STEEL POL TANKS (RCS: MACJ4-110)

Annex 4

REPORTING ACTIVITY _____ DATE _____

U. S.					
TANK #	CAPACITY MBBL	TANK LOCATION	TYPE OF PRODUCT	IN/OUT SERVICE	REASON OUT
				ETR SERVICE	REMARKS
TANK #	CAPACITY MBBL	TANK LOCATION	TYPE OF PRODUCT	IN/OUT SERVICE	REASON OUT
				ETR SERVICE	REMARKS

TANKAGE PLANNED NEXT 6 MONTHS

RVNAF					
TANK #	CAPACITY MBBL	TANK LOCATION	TYPE OF PRODUCT	BOD	REMARKS
TANK #	CAPACITY MBBL	TANK LOCATION	TYPE OF PRODUCT	% OF COMPLETION	BOD
					REMARKS

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APPENDIX H
PROPOSED CHANGE TO DOD DIRECTIVE 4140.25

APPENDIX H

PROPOSED CHANGE TO DOD DIRECTIVE

Number 4140.25

SUBJECT: Management of Petroleum Products

- References:**
- (a) DOD Directive 4140.25, "Management of Petroleum Products," January 6, 1965 (cancelled herein)
 - (b) DOD Directive 5105.22, "Defense Supply Agency (DSA)," December 9, 1965
 - (c) DOD Directive 4220.5, "Administration of Presidential Proclamation 3279, March 10, 1959, as amended, Petroleum Product Imports," July 17, 1963
 - (d) DOD Directive 4005.13, "Production Planning with Industry for National Emergency or Mobilization," March 27, 1958
 - (e) DOD Instruction 7730.21, "Petroleum Reporting Requirements," June 19, 1968

I. REISSUANCE

This Directive reissues reference (a) to delineate the responsibilities for the management of petroleum products within the Department of Defense.

II. PURPOSE

A. Pursuant to the authority vested in the Secretary of Defense, a limited Single-Manager Assignment is directed within the Department of Defense with authority, functions, responsibilities, and relationships as set forth herein.

B. The purposes and objectives of this assignment with respect to DOD supply management of petroleum products and services related thereto are:

1. To clarify relationships among military departments, Defense agencies, and other components of DOD.

2. To improve the effectiveness and economy of these operations throughout the DOD.

3. To ensure that the approved emergency and wartime requirements of the DOD are met.

III. BACKGROUND

Reference (a) delineated certain responsibilities for the supply management of petroleum products and services related thereto, that are changed herein.

IV. CANCELLATION

Reference (a) is hereby superseded and cancelled.

V. APPLICABILITY

The provisions of the Directive apply to the Joint Chiefs of Staff, military departments and the Defense Supply Agency (DSA).

VI. DEFINITIONS

A. Bulk Petroleum Products are: (1) All petroleum fuels and (2) those petroleum oils and lubricants which are handled in containers having a fill capacity of greater than 55 gallons.

B. Packaged Petroleum Products are petroleum oils, lubricants, greases, and petroleum specialty items handled in containers having a fill capacity of 55 gallons or less.

VII. RESPONSIBILITIES

A. The Joint Chiefs of Staff. The Joint Chiefs of Staff consider and act on all petroleum matters originating within or referred to the Joint Chiefs of Staff. To assist in carrying out their responsibilities, the Joint Chiefs of Staff will establish a Joint Petroleum Committee (JPC) chaired by the Director for Logistics, Joint Staff and consisting of representatives of the military services and the DSA. The JPC shall have the following responsibilities:

1. Advise and assist the JCS in establishing priorities and allocations of petroleum products when required during periods of international tension and war.
2. Resolve problems when Services and DFSC cannot agree. Pass unresolved problems to JCS to resolve.
3. Ensure the development and proper functioning of a Field Assistance Program to be operated by DFSC (see paragraph VI.D).
4. Monitor the responsibility assigned to DFSC in coordination with the military services to standardize procedures, regulations, forms and other documents for the supply, storage, distribution, transfer, and accounting for petroleum products.
5. Review plans for the supply of POL in time of war.
6. Recommend petroleum policies.
7. Assume cognizance of other POL matters as assigned by the Joint Chiefs of Staff.

B. Military Departments. The Secretary of each military department is responsible for the supply management of bulk petroleum products, including the funding, ordering, ownership and control of reserve and operating stocks, with the exception of those functions assigned to DSA/DFSC in paragraph VII.C and D below.

C. Defense Supply Agency

1. The Director, DSA, is responsible for integrated supply management of packaged petroleum products pursuant to the responsibilities set forth in Reference (b).
2. The Director, DSA, is designated the Single Manager for those DOD bulk petroleum functions set forth under the specific responsibilities assigned in paragraph VI.D to the operating agency. The Single Manager will establish the Defense Fuel Supply Center as the Single-Manager Operating Agency.

D. Defense Fuel Supply Center. DFSC is responsible for the following functions:

1. Requirements. Establish procedures to be used by the military departments and the unified and specified command in the submission of procurement and/or distribution requirements, including requirements for Mutual Defense Assistance and Civilian Aid Programs.

2. Procurement

a. Conduct or direct procurement of bulk petroleum items to meet the needs of the military departments and other authorized customers.

b. Contract for commercial petroleum services (such as storage and handling services, and into-plane contracts) on a worldwide basis, except that each military department may contract for into-plane refueling service at individual air stations and bases where the fuels are Government furnished.

c. Administer the national procurement priorities in the purchase of petroleum products as authorized by the Secretary of Defense.

d. Determine which items should be centrally procured and which items should be decentralized to local procurement. The designation or redesignation of petroleum items of supply from local to central procurement or vice versa, should allow sufficient time for an orderly adjustment of the affected programs by the military departments.

3. Contract Administration

a. Direct and control all phases of contract administration worldwide (ASPR 1-406). In overseas areas established inspection services and facilities of the military departments will be used. The use of military facilities and services does not compromise the overall responsibilities of DSA/DFSC to ensure proper contract administration is performed.

b. In discharging its responsibility for contract administration and supervision of delegated responsibilities, DFSC may assign such additional contract administration personnel to areas of contract performance as is necessary to carry out its responsibilities. Such personnel will be attached for administrative purposes to the same command as the inspector for procurement quality assurance.

c. Contract administration personnel assigned in the geographical area of contract performance including those on a temporary duty will coordinate their activities with appropriate local commanders.

d. Direct communication is authorized between DFSC and procurement inspectors, ordering officers and other personnel who perform contract administration or who have been delegated responsibilities requiring direct contracts with the contractors.

e. DSA will ensure that contract administration personnel, whether assigned to DSA/DFSC or to one of the military services acting under a delegation of authority, will keep supported military activities appropriately informed of problems that concern them.

4. Storage

a. In collaboration with the military departments, periodically review the requirements for operating and reserve bulk storage in the overseas commands and CONUS. Make recommendations to the military departments for joint utilization of

existing storage facilities in lieu of contracting for commercial facilities or acquisition of storage by Public Works construction.

b. Contract on a worldwide basis for bulk commercial petroleum storage required by the military departments and administer the contracts. DSA may delegate, when desirable, the contracting responsibility for commercial storage in specific overseas areas to overseas commanders through appropriate channels.

c. Ensure that before commercial storage contracts are awarded that the costs for such facilities will not be substantially and disproportionately higher than comparable Government facilities. The military departments will furnish cost estimates for comparative Government facilities. In the event of disagreement concerning relative costs and time-utilization factors, all pertinent data will be forwarded to the Joint Petroleum Committee for action.

5. Inventory Control

a. Coordinate the worldwide tanker distribution system for the Department of Defense. Coordinate agreements to insure the maximum of cross-servicing. Coordinate with appropriate military departments the redistribution of POL stocks in CONUS.

b. Select source and means of transportation and place orders to meet resupply requirements of bulk petroleum involving ocean-going tanker movements except tankers operating on the Great Lakes or as otherwise arranged.

c. Coordinate and promulgate interservice supply support agreements for products supplied in overseas areas.

6. Transportation. Coordinate and arrange for required tanker transportation for the movement of military petroleum products in accordance with criteria and procedures established by the Executive Director, Military Sea Transportation Service.

7. Cataloging. Perform cataloging functions prescribed in Reference (b).

8. Standardization

a. Perform standardization functions prescribed in Reference (b).

b. Represent the Secretary of Defense in the coordination of international petroleum standardization matters and interchangeability of petroleum products and keep that office informed as appropriate.

9. Oil Imports. Administer the DOD import allocation of finished petroleum products in accordance with Reference (c).

10. Compatible Procedures. In coordination with the military departments develop and maintain compatible procedures, regulations, forms and other documents for the supply, storage, distribution, and accounting for petroleum products.

11. Field Assistance. In coordination with the military departments develop a POL Field Assistance Program to provide assistance and advice to installations and activities of the military services, other DOD components and contractor activities. The objectives of the Field Assistance Program are to evaluate management functions performed in the field; determine the adequacy of DFSC sponsored procedures and regulations; identify potential problem areas and recommend preventive measures; identify actions necessary to improve effectiveness and economy; and provide Military Services and other DOD components information and advice concerning problems requiring their attention for corrective actions.

POL

E. The Director, DSA, is responsible for the following additional responsibilities related to the management of petroleum products:

1. Staff Assistance. Provide staff assistance and support to the office of the Secretary of Defense.
2. Mobilization Planning. Conduct mobilization planning in assigned areas of responsibilities, as limited by Reference (d).
3. Training. Coordinate departmental requirements for and implementation of training provided by the petroleum industry.
4. Reports. Prepare and compile reports in accordance with Reference (e).

VIII. EFFECTIVE DATE AND IMPLEMENTATION

This Directive is effective immediately.

APPENDIX I
CHARTER FOR JOINT PETROLEUM COMMITTEE

APPENDIX I

CHARTER FOR JOINT PETROLEUM COMMITTEE

1. The Joint Petroleum Committee (JPC) is hereby established as an agency of the Joint Chiefs of Staff.
2. MISSION. The mission of the Joint Petroleum Committee is to:
 - a. Advise the Joint Chiefs of Staff on petroleum policy,
 - b. Assist in the coordination of all military petroleum functions and in the resolution of interface problems, and
 - c. Review petroleum planning for contingencies to ensure effective and efficient petroleum logistic support of military operations.
3. MEMBERSHIP. The Joint Petroleum Committee is composed of:
 - a. Chairman - Director for Logistics, Joint Staff
 - b. Principal Members
 - (1) Representing the U.S. Army - Deputy Chief of Staff, Logistics
 - (2) Representing the U.S. Navy - Deputy Chief of Naval Operations (Logistics)
 - (3) Representing the U.S. Marine Corps - Assistant Chief of Staff G-4,
Headquarters
 - (4) Representing the U.S. Air Force - Deputy Chief of Staff, Logistics
 - (5) Representing DSA - Commander, DSA
 - (6) Representing the Operations Directorate, OJCS - Vice Director for
Operations, Joint Staff
 - c. Secretary of the Joint Petroleum Committee - Chief Petroleum Branch, Services Division, J-4.
 - d. Recorder of the Joint Petroleum Committee - As appointed by the Chairman.
4. RESPONSIBILITIES. The Joint Petroleum Committee will:
 - a. Advise and assist the JCS in establishing priorities and allocations of petroleum products when required during periods of international tension and war.
 - b. Resolve problems when Services and DSA/DFSC cannot agree. Pass unresolved problems to JCS to resolve.
 - c. Ensure the development and proper functioning of a POL Field Assistance Program to be operated by DSA/DFSC.

POL

d. Monitor the responsibility assigned to DSA/DFSC in coordination with the military services to standardize procedures, regulations, forms, and other documents for the supply, storage, distribution, transfer, and accounting for petroleum products.

e. Review plans for the supply of POL in time of war.

f. Recommend petroleum policies.

g. Perform such other duties as the Joint Chiefs of Staff may direct.

5. PROCEDURES. The Joint Petroleum Committee will:

a. Establish its own standing operating procedures to include those that will be in effect in the event relocation to an alternate command post is directed.

b. Receive administrative support from the Military Secretariat, J-4.

c. Refer to the Joint Chiefs of Staff those matters on which unresolved divergent views exist.

d. Meet quarterly or upon call of the Chairman, as required.

e. Request from agencies of the Department of Defense such information as may be required in connection with its duties.

f. Invite, at its discretion, representatives from the Service POL ICP, JCS Directorates, or other interested parties to participate in the meetings of the Joint Petroleum Committee or JPC Secretariat.

g. Honor the requests of other offices to attend meetings of the Joint Petroleum Committee or JPC Secretariat.

6. THE JOINT PETROLEUM COMMITTEE SECRETARIAT. The Joint Petroleum Committee Secretariat is established as an agency of the Joint Petroleum Committee with membership and functions as follows:

a. Membership of the Joint Petroleum Committee Secretariat:

(1) Chairman -- Chief, Petroleum Branch, Services Division, J-4

(2) J-4 Representative -- Materiel and Service Division, J-4

(3) One representative each from the Army, Navy, Air Force, Marines, and Defense Fuel Supply Center (preferably officers with POL responsibilities at the headquarters level).

The Army, Navy, Air Force, and Marine Corps representatives will represent their respective Service on the Joint Petroleum Committee Secretariat on an on-call as-required basis. Each individual will remain assigned to his Service and will provide the liaison between his Service and the Joint Petroleum Committee Secretariat.

b. Functions of the Joint Petroleum Committee Secretariat:

(1) Provide the necessary continuity for the Joint Petroleum Committee.

(2) Conduct meetings of the Joint Petroleum Committee Secretariat as frequently as required.

POL

(3) Prepare and publish standing operating procedures for the conduct of the Joint Petroleum Committee and the Joint Petroleum Committee Secretariat and furnish such support as the Joint Petroleum Committee requires.

(4) Maintain cognizance of petroleum products and petroleum handling requirements and capabilities.

(5) Identify problem areas, as appropriate, for consideration of the Joint Petroleum Committee.

(6) Prepare the agenda for formal Joint Petroleum Committee meetings.

(7) Promulgate the results of meetings of the Joint Petroleum Committee.

(8) Respond to requirements of the Joint Petroleum Committee as required.

APPENDIX J
GLOSSARY

APPENDIX J

GLOSSARY

**Aerospace Fuels Field
Office (AFFO)**

A decentralized element or field organization representing the Director of Aerospace Fuels SAAMA (San Antonio Air Materiel Area, Kelly Air Force Base, Texas) with Air Force regional petroleum logistic support responsibility for a specific geographical area.

**Aerospace Fuels Petroleum
Supply Office (AFPSO)**

A decentralized component of the Directorate of Aerospace Fuels. It accomplishes centralized commodity management and staff surveillance over worldwide USAF programs for petroleum products. Serves as the accounting office for the aviation fuels category, fuels division, Air Force stock fund. Frequently referred to as Detachment 29, SAAMA - located at Cameron Station, Alexandria, Virginia.

**Air Force Contract
Monitoring Points**

Fuels organizations in the various overseas areas that perform petroleum requirement and distribution functions in support of the Aerospace Fuels Petroleum Supply Offices. Normally, this is the fuels office in the U.S. Air Force major command headquarters. When there is no U.S. Air Force major headquarters in the area, a base fuels management office serves as the contract monitoring point. The functions of contract monitoring points include the development and submission of procurement requirements to the Aerospace Fuels Petroleum Supply Office and discharge of the Air Force responsibility for petroleum distribution in the assigned geographical area.

**Air Force POL Retail
Distribution System**

An Air Force-owned or -leased petroleum storage facility which receives, stores, and issues peacetime operating and war readiness material stocks of aviation fuels for bases dependent thereon for supply. These retail distribution stations may be operated and maintained by military personnel or by a commercial organization under the terms of service contracts negotiated by the Defense Fuels Supply Center as requested by the Air Force Logistics Command.

POL

Amphibious Assault Bulk Fuel System (AAFS)	A movable fuel storage system consisting of rubber storage tanks, pumps and accessories, mainly used in lieu of a permanent bulk storage system.
APC	Army Petroleum Center. The Inventory Control Point (ICP) for Army POL.
AVFUEL	Aviation Fuel (Jet Fuels and Aviation Gasolines).
Barrel (BBL)	A unit of measure used by the petroleum industry which equals 42 U.S. gallons.
Black Cargoes (Dirty Cargoes)	A general term used to describe liquid cargoes of crude oil or residual fuel oils.
Bulk Petroleum Products	Those petroleum products that are normally transported by pipeline, rail tank car, tank truck, tank trailer, barge and/or ocean tanker and stored in tanks or containers having fill capacities greater than 55 gallons.
Bulletin-Type Contracts	One of a group of contracts about which information is published in a contract bulletin, which is disseminated to ordering, paying, and other offices concerned. The bulletin is used by them, for their functions in lieu of an exact copy of the contract itself. Bulletin contracts are unfunded, open-end contracts usually for POL items that are stocked in commercial retail inventories, such as Motor Gasoline, Diesel Fuel, Burner Fuels, Dry Cleaning Solvents and common lubricating oils.
Bunkering	To load fuel into a vessel for its own use as distinguished from loading it as cargo.
Buyers Guide	A term used to describe the cyclic fuel and oil requirements that are submitted to the Defense Fuel Supply Center. The term encompasses the Military Interdepartmental Purchase Request that reflects the total procurement, quantitative and special, instructions, as well as the document that reflects the quantitative requirements for the individual using activities.
Clean Cargoes	Refined petroleum products, such as aviation and motor gasolines, diesel oils, jet fuels, kerosene, and lubricating oils.
Contract Administration	All functions required to be performed by the Government after purchase/procurement as applicable and as set forth in Armed Services Procurement Regulation 1-406.
Contractor Support	POL support by in-country contractors.

CONUS Shuttle Movements	The movement of products by tanker between CONUS locations.
Deadweight Tons	A term used to indicate the total load capacity of a ship — when applied to tankers should be multiplied by eight (8) to determine the approximate barrel capacity.
Detachment 29, SAAMA	Synonymous with the AFPSO.
DFM	Fuel Oil, Diesel Marine.
DFSC	Defense Fuel Supply Center, a subordinate office of Defense Supply Agency (DSA).
Directorate of Aerospace Fuels	A supply organization of Air Force Logistics Command, at San Antonio Air Materiel Area, responsible for the management of petroleum, missile fuel, and chemical logistic support and the operation and management of the Fuels Division, Air Force Stock Fund.
Distribution Plan	Document used by the Aerospace Fuels Field Office and Contract Monitoring Points to inform using activities of the source or sources from which they will receive aviation fuel/oil support during the contract period. In the case of FOB origin contract items, it also informs the contractor of the activities that are authorized to place orders for products.
Distribution Plan Authorization	Document used by the Aerospace Fuels Petroleum Supply Office to implement, control, and manage the quantity of aviation fuel that will be lifted from contracts. The distribution plan authority sets forth a total quantitative ceiling by product which the individual Aerospace Fuels Field Office and Contract Monitoring Point are expected to utilize during contract period.
Distribution Pattern Evaluation Conference	An annual or less frequent meeting of logistics specialists to evaluate each Air Force Base, Air Force POL retail distribution station and pipeline qualitative and quantitative tankage. The purpose of the periodic evaluation is to systematically review Aerospace Fuels distribution patterns as they apply to individual Air Force locations and identify improvement which will enhance support effectiveness, produce economies, and preparation of future Buyers Guides.
Drumming	The act of filling drums.
Drums	55 gallon metal containers.

POL

Evergreen Contract	The large contract with Caltex Oil Products Company to supply the Government POL FOB its Arabian Gulf refineries. The contract continues until cancelled by either party on 2 years notice.
Facilities	The generic term for complete facilities to include, as applicable, means of receiving, storing, dispensing, drumming and transporting POL.
FASCOM	Field Army Support Command. Designed to support a type field Army of 12 divisions.
First-Destination Transportation	The movement of products from source to first point of storage.
FOB origin/FOB destination	Free-on-board origin or free-on-board destination contractual terms which indicate point of acceptance of products by the Government.
Funded Contract	A contract under which Government funds are cited and committed. It usually binds the Government to accept the contract quantity, with allowed variations of a specified percentage over or under the contract quantity if caused by loading, shipping or manufacturing processes. Some funded contracts do not bind the Government to take more than a nominal quantity while others require the Government to accept a specified part of the contract quantity.
GSU (Army)	General Supply Units are organized to perform the basic storage operations of receipt, warehousing (terminal POL storage), and issue in corps areas and field Army service area in the field Army. (FM 54-3, Dec. 1968, "The Field Army Support Command".)
Handy-size tanker	A tank ship of between 20,000 and 25,000 dead-weight tons.
In-Country Contracts (Vietnam and Thailand)	Contracts with oil companies having facilities in Vietnam and Thailand for products as well as services required to be performed in-country such as receipt, storage, drumming, transportation and into-plane servicing.
Into-Plane Deliveries	A type of contractual arrangement used to service aircraft with fuels and oils utilizing contractors' services, equipment, and products. Such products are contractor-owned until delivered into aircraft.
Inventory and Capital Control	A system of managing the Air Force Stock Fund by using an approved operating program containing monthly objectives of inventory on hand, on order, and in transit, rather than using apportionment and obligation authority limitations. Procurement is accomplished only as required to

POL

**Inventory Control Point
(for POL)**

meet anticipated sales and maintain the planned inventory objectives.

An organizational unit or activity within a military department supply system which is assigned the primary responsibility for the management of petroleum products for the Department as a whole.

**Joint Petroleum Office
(JPO)**

A staff office of each commander of a unified command. The primary function of the JPO is to discharge staff petroleum logistic responsibility within the cognizance of the unified commander.

Lift Point

The specific location where cargo(es) are loaded on tankers.

Management Fund

A fund authorized by Public Law to conduct economically and efficiently the operations of the Department of Defense that are financed by at least two appropriations but whose costs cannot be immediately distributed and charged to those appropriations. Expenditures from such a fund may be made for material (other than stock), personal services, and services under contract. The establishment of such a fund in the Defense Supply Agency was recommended in the Report of the Petroleum Management Study Group for the DOD under the Optimum Management Option. The Defense Supply Agency would utilize this fund to finance the initial procurement of petroleum products and first destination charges.

MPSA

Military Petroleum Supply Agency. No longer in existence, functions now are performed by Defense Fuel Supply Center.

NFSO

Navy Fuel Supply Office. The Inventory Control Point (ICP) for Navy POL.

NSFO

Navy Special Fuel Oil. A residual fuel oil burner normally used for ship propulsion.

**Operating Level of
Supply**

The quantities of materiel required to sustain operations in the interval between requisitions or the arrival of successive shipments.

Operating Stock Levels

Synonymous with operating level of supply.

Options

Options 1, 2, 3, and 4 and the Optimum Management Option appear in the POL monograph. Options 1 through 4 were management options offered by the Secretary of Defense to the Petroleum Management Study Group for consideration during its study of petroleum management in the DOD.

Option 1 - Continuing the status quo.

POL

Option 2 - Continuing the status quo, plus necessary internal changes in the Inventory Control Points (ICP) of the military departments at Cameron Station to ensure standardization of ICP responsibilities, functions, and procedures.

Option 3 - Establishing a single-manager arrangement under one military department to assume petroleum management responsibilities and functions now assigned to the military departments and the Defense Supply Agency.

Option 4 - Expanding the Defense Supply Agency's responsibilities and functions to assume petroleum management responsibilities and functions now assigned to the military departments.

Optimum Management Option - The term used in the Report of the Petroleum Management Study Group for the DOD for the recommended management option that would make the most effective and efficient use of the total resources of the DOD and could be applied to the management of petroleum.

Ordering (petroleum products)

The process of formally requesting, from existing contracts, that a product be made available (or movement from or pick up at the source or for the delivery by the contractor to a specific destination.

Packaged Fuels

Those bulk petroleum fuels which, because of operational necessity, are packaged and supplied in containers of 5. to 55-gallon capacity. Since the fuels are generally kept in bulk storage and and packaged for immediate issue, packaged fuels are managed as a part of bulk fuels.

POL

Petroleum, oils and lubricants. A broad term that includes all petroleum and associated products used by the Armed Forces.

Property Administration

Those functions required to be performed by a Government representative, to protect the Government's interest with respect to Government property in the custody of the contractor as set forth in Supplement No. 3 to the Armed Services Procurement Regulation.

PWRS

Pre-positioned War Reserve Stock. The quantity of an item acquired and positioned against a pre-positioned war reserve requirement.

Quality Assurance Representative(s) (QAR)	Individual(s) responsible for assuring that contractors comply with contractual requirements in the furnishing of petroleum products and services.
Quality surveillance	The aggregate of measures used to determine and to maintain the quality of Government-owned petroleum products, to the degree that such products are suitable for the intended use.
Scheduling	The process of arranging for and the coordination of actions necessary for the lift and movement of bulk fuels by tankers to a destination within a specified period of time.
SEA	Southeast Asia defined as Vietnam, Thailand, Laos, and Philippines.
Second-Destination Transportation	The movement of products from first place of storage to a second place of storage.
Slate	A monthly stock status and planned 5 months' delivery requirements report for those products that are to be met by tanker delivery. The three types of Slates are written, message, and shuttle.
Source Selection	A two-part process of establishing the supplier or lift point that will provide the product(s) for a specific cargo, tender, load, or destination. Initial determination of source is accomplished when contracts are awarded and second (when more than one supplier or lift point is under contract), the selection of the one that will satisfy the need at the time.
Split Cargoes	The loading of a ship with more than one type or grade of product.
Split Discharge	The off-loading of a ship's cargo at more than one discharge point.
Split Loading	The loading of a ship at more than one location.
Sub-Area Petroleum Office (SAPO)	Offices established, at the direction of unified commanders, to perform the same general functions for a subordinate command as the Joint Petroleum Office for the unified command.
Tactical Airfield Fuel Dispensing Systems (TAFDS)	A movable fuel storage and dispensing system consisting of rubber storage tanks, pumps, filtering devices, hoses, and other accessories necessary for storing and/or servicing aviation and ground fuels.

POL

Tank Car	Railroad equipment used for movement of bulk products.
Tankers	Tank ships designed for transportation of liquid cargo, principally petroleum.
Tank Truck	Over the road bulk product movement equipment.
Unfunded Contract or Unfunded Open-End Contract	A contract under which no Government funds are cited or committed and the Government is legally committed to accept only a nominal amount. On the other hand, the contractor is legally bound to deliver, if order (by funded orders), up to the contract quantity. The maximum delivery rate at which the contractor is required to fill orders and the advance notice the Government is required to give before the required delivery date are usually shown in the contract.
Ullage	The distance from a given point at the top of a container down to the surface of the liquid, i. e., the amount of empty bulk storage available.
War Reserves	Stocks of material amassed in peacetime to meet the increase in military requirements consequent upon an outbreak of war. War reserves are intended to provide the interim support essential to sustain operations until resupply can be effected.
WESTPAC	Western Pacific area.

APPENDIX K
LIST OF ACRONYMS AND ABBREVIATIONS

APPENDIX K

LIST OF ACRONYMS AND ABBREVIATIONS

ADSAF	Automatic Data Systems Within The Army in The Field
AF	Air Force
AFAFFO	Air Force Aerospace Fuels Field Office
AFLC	Air Force Logistics Command
AFM	Air Force Manual
AFR	Air Force Regulations
AFSSSEE (AFSSSKE)	Department of the Air Force Fuels Branch
AMC	U.S. Army Materiel Command
AO	Fleet Oiler
AOE	Fleet Oiler And Ammunition
AOG	Gasoline Tanker
AOR	Replenishment Oiler
APC	Army Petroleum Center
AR	Army Regulation
ARL	Landing Craft Repair Ship
ARPAC	U.S. Army, Pacific
ASAP	Abolish Stealing of American Petroleum
ASD (I&L)	Assistant Secretary of Defense (Installations & Logistics)
AVGAS	Aviation Gasoline
AVLUBES	Aviation Lubricants
BBL	Barrel
BURANDAINST	Bureau of Supplies and Accounts Instruction
CINC	Commander in Chief
CINCAL	Commander in Chief, Alaska
CINCEUR	Commander in Chief, Europe

POL

CINCLANT	Commander in Chief, Atlantic
CINCPAC	Commander in Chief, Pacific
CINCPACAF	Commander in Chief, Pacific Air Forces
CINCPACFLT	Commander in Chief, Pacific Fleet
CINCSTRIKE	Commander in Chief, U.S. Strike Command
CINCUSAREUR	Commander in Chief, U.S. Army in Europe
CINCUSARPAC	Commander in Chief, U.S. Army in Pacific
CINCUSNAVEUR	Commander in Chief, U.S. Navy in Europe
CINCPACREPPHIL	Commander in Chief, Pacific Representative in the Philippines
CINCPACREPRYUKYUS	Commander in Chief, Pacific Representative in the Ryukyus
CNO	Chief of Naval Operations
COMNAVSUPPACT	Commander, Naval Support Activity
COMSERVPAC	Commander, Service Forces, Pacific
COMUSMACTHAI	Commander, U.S. Military Assistance Command, Thailand
COMUSMACV	Commander, U.S. Military Assistance Command, Vietnam
CONSSTOC	Contingency Support Stocks
CONUS	Continental United States
COSTAR	Combat Support of the Army
CTZ	Corps Tactical Zone
DA	Department of the Army
DCAS	Defense Contract Administration Service
DCSLOG	Deputy Chief of Staff for Logistics
DET-29	Detachment 29, San Antonio Air Materiel Area
DFM	Fuel Oil, Diesel Marine
DFSC	Defense Fuel Supply Center
DGSC	Defense General Supply Center
DMZ	Demilitarized Zone
DOD	Department of Defense
DP	Distribution Plan

DPA	Distribution Plan Authorization
DSA	Defense Supply Agency
DSAM	Defense Supply Agency Manual
DSAR	Defense Supply Agency Regulations
DSAR	Defense Supply Agency Regulations
DSU	Direct Support Unit
dwt	Deadweight Tons
EFSC	Engineer Functional Components System
EPGA	Emergency Petroleum and Gas Administration
FOB	Free-On-Board
FRELOC	Fast Relocation European Line of Communication
FSA	Forward Support Area
GAO	General Accounting Office
GBL	Government Bill of Lading
GSU	General Support Unit
HQMACV	Headquarters Military Assistance Command, Vietnam
ICP	Inventory Control Point
I CTZ	I Corps Tactical Zone
INTA	International Tanker
JCS	Joint Chiefs of Staff
JLRB	Joint Logistics Review Board
JPO	Joint Petroleum Office
JP-4, JP-5	Grades of Turbine Fuel, Aviation
JPC	Joint Petroleum Committee
KERO	Kerosene
LCM	Landing Craft Mechanized
LST	Tank Landing Ship
LUBES	Lubricants
MAC	Military Airlift Command
MACJ44	Office, Commander, U.S. Military Assistance Command, Vietnam (for POL)

POL

MACTHAI	Military Assistance Command, Thailand
MACV	Military Assistance Command, Vietnam
MAP	Military Assistance Program
MBBL	1,000 barrels
MCO	Marine Corps Order
MCOP	Marine Corps Order in Public Form
MCP	Military Construction Program
MEMO	Memorandum
MILSTRIP	Military Standard Requisitioning and Issue Procedure
MIPR	Military Interdepartmental Procurement Request
MJCS	Joint Chiefs of Staff Memorandum
MOGAS	Automotive Gasoline
MPSA	Military Petroleum Supply Agency
MSTS	Military Sea Transport Service
MTMTS	Military Traffic Management and Terminal Service
NASA	National Aeronautical & Space Administration
NATO	North Atlantic Treaty Organization
NAVFAC	Naval Facilities Engineering
NAV-MED	U.S. Naval Forces - Mediterranean
NAV SPEC	Navy Special Fuel Oil
NAVSUP PUB	Naval Supply & Systems Command Publication
NAVSUPINST	Naval Supply Systems Command Instruction
NFD	Navy Fuel Depot
NFSO	Navy Fuel Supply Office
NICP	National Inventory Control Point
NSA	National Security Agency
NSC	Navy Supply Center
NSD	Naval Supply Depot
NSFO	Navy Special Fuel Oil

POL

OASD (I&L)	Office of Assistant Secretary of Defense (Installations and Logistics)
OASD (SA)	Office of Assistant Secretary of Defense (Systems Analysis)
OASD (S&L)	Office of Assistant Secretary of Defense (Supply and Logistics)
OCE	Office Chief of Engineers
O&MA	Operation and Maintenance Appropriation
OP	Operation
OPLAN	Operations Plan
OP NAV	Office of Chief of National Operations
OPNAVINST	Instructions issued from Office Chief of Naval Operations
OSD	Office of the Secretary of Defense
PACAF	Headquarters, Pacific Air Forces
PACOM	Pacific Command
PBR	Patrol Boat
PC&S	Post, Camp, and Station
PDO	Property Disposal Offices
POL	Petroleum, oil and lubricants
POLIC	Petroleum Intersectional Command
POS	Peacetime Operating Stocks
PUB	Publication
PWRS	Pre-Positioned War Reserve Stocks
QAR	Quality Assurance Representatives
RCS	Reports Control System
R&D	Research and Development
RFP	Request for Proposal
RMK	Raymond, Morrison, and Knudsen
ROAD	Reorganization Objective Army Divisions
RVN	Republic of Vietnam
SAPO	Sub-Area Petroleum Office

POL

SAPOMACTHAI	Sub-Area Petroleum Office, Thailand
SAPOMACV	Sub-Area Petroleum Office, Vietnam
SAPOTHAI	Sub-Area Petroleum Office, Thailand
SAPOV	Sub-Area Petroleum Office, Vietnam
SCN	Ship Construction Navy
SEA	Southeast Asia
SEASIA	Southeast Asia
SECDEF	Secretary of Defense
SER	Serial
SERPAC	Commander, Service Force, Pacific Fleet
SLAT	Strategic Logistical Activities, Thailand
SOP	Standard Operating Procedures
T-1	Class of Tanker ranging from 11.8 to 31.3 thousand barrel capacity
T-2	Class of Tanker ranging from 120 to 138 thousand barrel capacity
T-5	Class of tanker ranging up from 151,000 barrel capacity
TAC	Tactical Air Command
TAFDS	Tactical Airfield Dispensing System
TASCOM	Theater Army Support Command
TF116	River Patrol Force
TMT	Tactical Marine Terminal
USACDC	United States Army Combat Developments Command
USAF	United States Air Force
USAREUR	United States Army, Europe
USAFE	United States Air Forces in Europe
USAMC	United States Army Material Command
USAPC	United States Army Petroleum Center
USARV	United States Army, Vietnam
USCINCEUR	United States Commander in Chief, Europe
USCINCSO	Commander in Chief, United States Southern Command

POL

VCNO	Vice Chief of Naval Operations
VNAF	Vietnam Air Force
WESTPAC	Western Pacific
YFU	Yard Freight Utility Craft
YRBM	Repair, Berthing, and Messing Barges

APPENDIX L

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APPENDIX L

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